S.R. 66 (SOUTH JEFFERSON AVENUE)
SLOPE STABILIZATION
CITY OF DEFIANCE, OHIO

Jeff. Ave. Stabilization

LEGEND

IRON PIN	IRON PIPE
R.R. SPIKE	P.K. NAIL
MONUMENT BOX	WOOD HUB
STONE MONUMENT	DRILL HOLE
PROPERTY LINE	POWER POLE
GUY WIRE	R.R. CROSSING SIGN
MANHOLE	GUY POLE
CATCH BASIN	TELEPHONE POLE
FIRE HYDRANT	LIGHT POLE
VALVE (WATER OR GAS)	BRACE POLE
C.O. CLEANOUT	SIGN
MAIL BOX	SHRUB
POST	STUMP
FENCE LINE	PINE TREE
CENTERLINE	TREE
GUARDRAIL	
96.75 PROPOSED ELEVATION	

700 EXISTING CONTOUR
700 PROPOSED CONTOUR
EX. WATER LINE
EX. GAS LINE
EX. SEWER
BURIED ELECTRIC
BURIED TELEPHONE

SHEET INDEX

COVER SHEET
PLAN AND PROFILE SHEETS **1–3**
CROSS SECTIONS **4–7**
DETAIL SHEETS **8–9**
MAINTENANCE TRAFFIC DETAILS **10**

UTILITIES

ELECTRIC
TOLEDO EDISON
134 LAWRENCE AVENUE
WAUSEON, OHIO 43567
JOHN WIRICK
419–249–4170 OR
1–800–447–3333

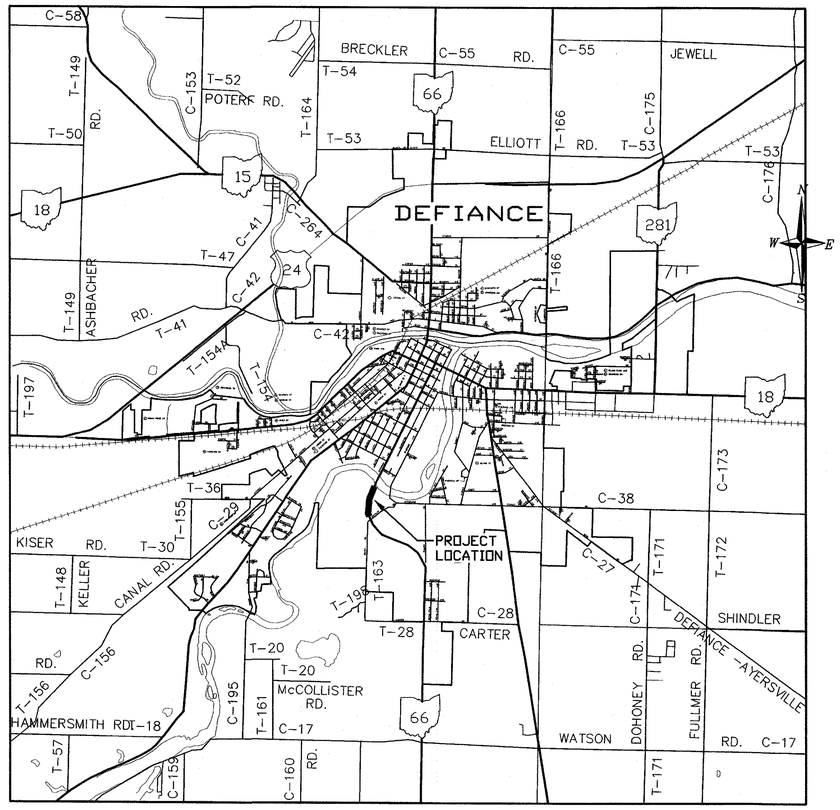
GAS
OHIO GAS COMPANY
1460 QUALITY DRIVE
DEFIANCE, OHIO 43512
MIKE CREAGER
1–800–529–6511
EMERGENCY NO.
1–800–331–7396

CABLE TV
TIME WARNER CABLE
310 JEFFERSON STREET
DEFIANCE, OHIO 43512
419–784–1992
TOM BAUM – EXT 3001
MIKE HANNA – EXT 3002

WATER, SANITARY, STORM
CITY OF DEFIANCE/MUNICIPAL BUILDING
631 PERRY STREET SUITE 102
DEFIANCE, OHIO 43512
419–784–2249

TELEPHONE
EMBARQ
812 DOLAN STREET
DEFIANCE, OHIO 43512
419–782–6819

NATURAL GAS PIPELINE
PAN HANDLE EASTERN
PIPE LINE COMPANY
1015 ILLINOIS AVENUE
MAUMEE, OHIO 43537
MIKE VIERK
CELL 419–466–4157
GEORGE W. BOCK
419–893–3358 EXT. 203
CELL 419–467–1258



LOCATION MAP

UNDERGROUND UTILITIES

TWO WORKING DAYS
BEFORE YOU DIG
CALL 1–800–362–2764 (TOLL FREE)
OHIO UTILITIES PROTECTION
SERVICES
NONMEMBERS MUST
BE CALLED DIRECTLY

– DEFIANCE CITY COUNCIL –

TIM HOLTSBERRY, PRESIDENT
LISA ELDERS, CLERK OF COUNCIL

JOSEPH EURESTE
LARRY BRYANT
DARRELL HANDY
STEVE HUBBARD
GARY BUTLER
ELLEN UPP
CHRIS ENGEL

CITY ADMINISTRATOR
JEFF LEONARD

MAYOR
ROBERT ARMSTRONG

APPROVAL SIGNATURES

CITY OF DEFIANCE

LEE P. RAUSCH, P.E., CITY ENGINEER — 7/22/08 DATE

POGGEMEYER DESIGN GROUP

KENNETH A. MAAG, P.E. — 7-21-08 DATE

RICHARD E. WEAVER, P.E. — 07-21-08 DATE

STATE OF OHIO — KENNETH A. MAAG — 53316 — REGISTERED PROFESSIONAL ENGINEER

STATE OF OHIO — RICHARD E. WEAVER — 46957 — REGISTERED PROFESSIONAL ENGINEER

POGGEMEYER DESIGN GROUP, INC.
ARCHITECTS – ENGINEERS – PLANNERS PH. 419–782–3067
935 CLEVELAND AVENUE DEFIANCE, OHIO 43512

1120–130

ANY INFORMATION OR DATA ON THIS DRAWING IS NOT INTENDED TO BE SUITABLE FOR REUSE BY ANY PERSON, FIRM OR CORPORATION OR ANY OTHERS ON EXTENSIONS OF THIS PROJECT OR FOR ANY USE ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION AND ADAPTATION BY THE ENGINEER, ARCHITECT OR SURVEYOR FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT THE USERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO THE ENGINEER, ARCHITECT OR SURVEYOR.

S.R. 66 EMBANKMENT STABILIZATION CITY OF DEFIANCE, OHIO	DRAWN MSB	DATE 07/21/08	1/10
POGGEMEYER DESIGN GROUP, INC. ENGINEERS + ARCHITECTS + PLANNERS	CHECKED	DATE	
	APPROVED	DATE	
	REVISIONS	DATE 07/21/08	

NOTES:

1. CONTRACTOR TO LOCATE EXISTING AGGREGATE DRAINS AND EXTEND AS REQUIRED. ASSUME 50' SPACING, ALTERNATE SIDES.

2. CONTRACTOR TO REMOVE GUARDRAIL AS WORK PROGRESSES. RE-USE EXISTING GUARDRAIL, POSTS AND ACCESSORIES. CONTRACTOR TO REPLACE ANY DAMAGED MATERIAL.

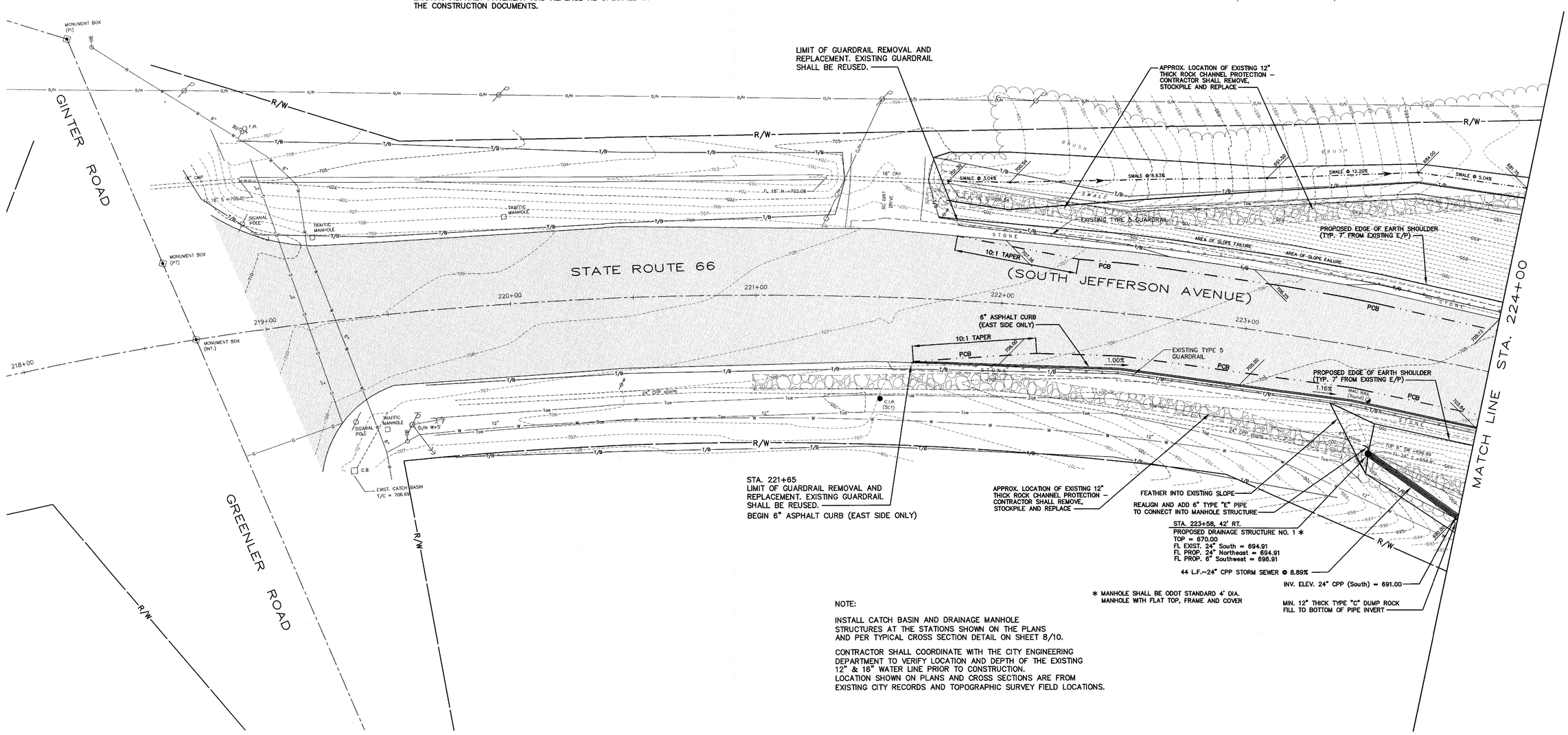
3. PORTABLE CONCRETE BARRIER (PCB) TO MAINTAIN TRAFFIC. PCB TO BE PLACED A MIN. OF 5'-0" FROM THE EXISTING TRAFFIC EDGE LINE. COST IS INCIDENTAL TO MAINTAINING TRAFFIC.

4. CONTRACTOR SHALL COORDINATE WITH CITY ENGINEERING DEPARTMENT AND PROJECT ENGINEER ON PAVEMENT REPAIR. WHERE PAVEMENT ASPHALT EDGE IS BROKEN / DETERIORATED, CONTRACTOR SHALL NEATLY SAW-CUT A MINIMUM 1'-0" INTO EXISTING ASPHALT PAVEMENT AND REPLACE AS SPECIFIED IN THE CONSTRUCTION DOCUMENTS.

GRAPHIC SCALE

20 0 10 20 40

(SCALE 1" = 20')



NOTE:

INSTALL CATCH BASIN AND DRAINAGE MANHOLE STRUCTURES AT THE STATIONS SHOWN ON THE PLANS AND PER TYPICAL CROSS SECTION DETAIL ON SHEET 8/10.

CONTRACTOR SHALL COORDINATE WITH THE CITY ENGINEERING DEPARTMENT TO VERIFY LOCATION AND DEPTH OF THE EXISTING 12" & 16" WATER LINE PRIOR TO CONSTRUCTION. LOCATION SHOWN ON PLANS AND CROSS SECTIONS ARE FROM EXISTING CITY RECORDS AND TOPOGRAPHIC SURVEY FIELD LOCATIONS.

STATE ROUTE 66 – STA. 218+00 TO STA. 224+00

1120-130

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NOTES:

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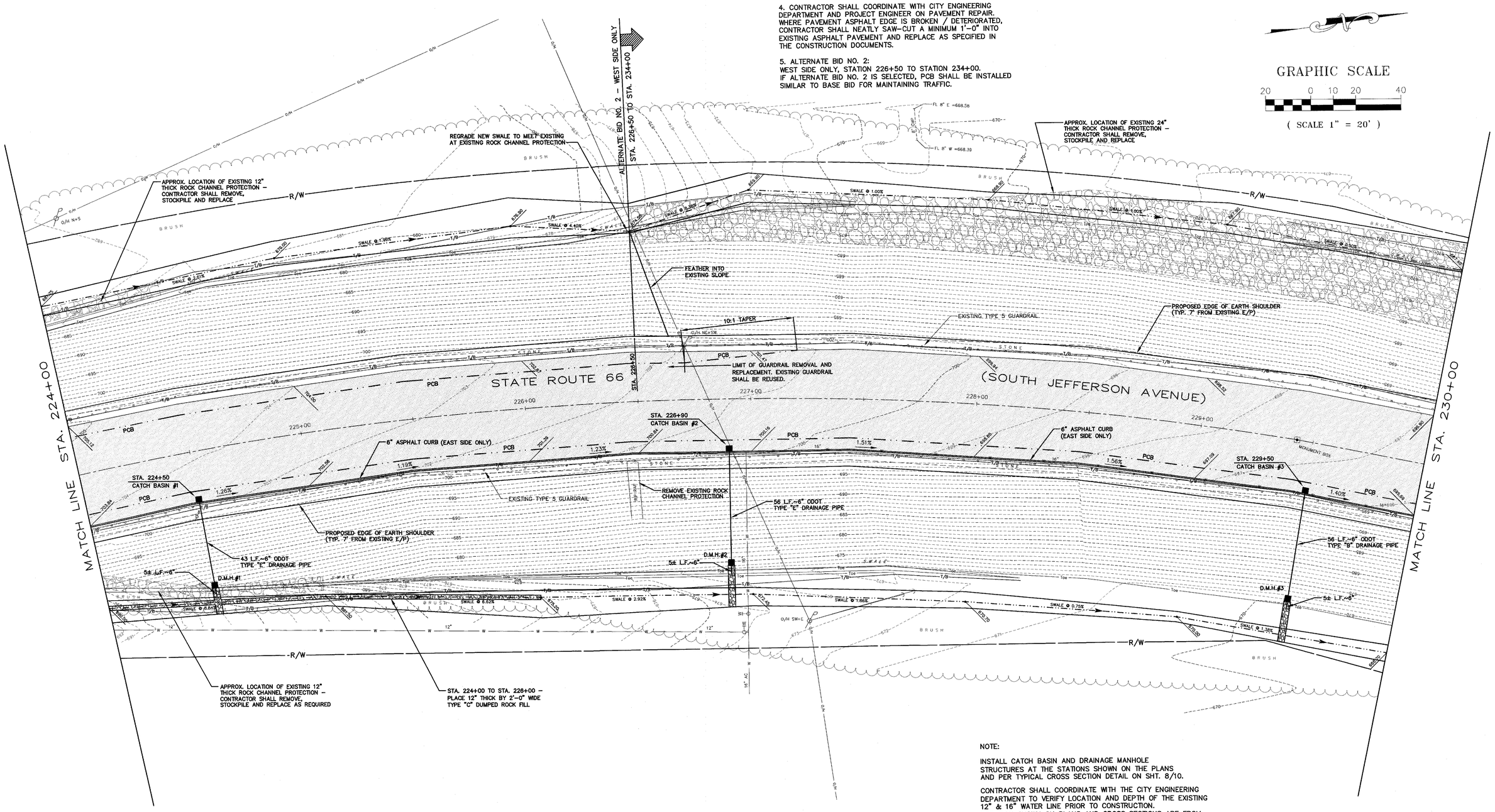
5. ALTERNATE BID NO. 2:
WEST SIDE ONLY, STATION 226+50 TO STATION 234+00.
IF ALTERNATE BID NO. 2 IS SELECTED, PCB SHALL BE INSTALLED SIMILAR TO BASE BID FOR MAINTAINING TRAFFIC.

S.R. 66 EMBANKMENT STABILIZATION CITY OF DEFIANCE, OHIO	DRAWN MSB	DATE 07/21/08	2/10
POGGEMEYER DESIGN GROUP, INC. ENGINEERS + ARCHITECTS + PLANNERS	CHECKED	DATE	
	APPROVED	DATE	
	REVISIONS	DATE 07/21/08	

GRAPHIC SCALE

20 0 10 20 40

(SCALE 1" = 20')



NOTE:

INSTALL CATCH BASIN AND DRAINAGE MANHOLE STRUCTURES AT THE STATIONS SHOWN ON THE PLANS AND PER TYPICAL CROSS SECTION DETAIL ON SHT. 8/10.

CONTRACTOR SHALL COORDINATE WITH THE CITY ENGINEERING DEPARTMENT TO VERIFY LOCATION AND DEPTH OF THE EXISTING 12" & 16" WATER LINE PRIOR TO CONSTRUCTION. LOCATION SHOWN ON PLANS AND CROSS SECTIONS ARE FROM EXISTING CITY RECORDS AND TOPOGRAPHIC SURVEY FIELD LOCATIONS.

STATE ROUTE 66 - STA. 224+00 TO STA. 230+00

1120-130

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NOTES:

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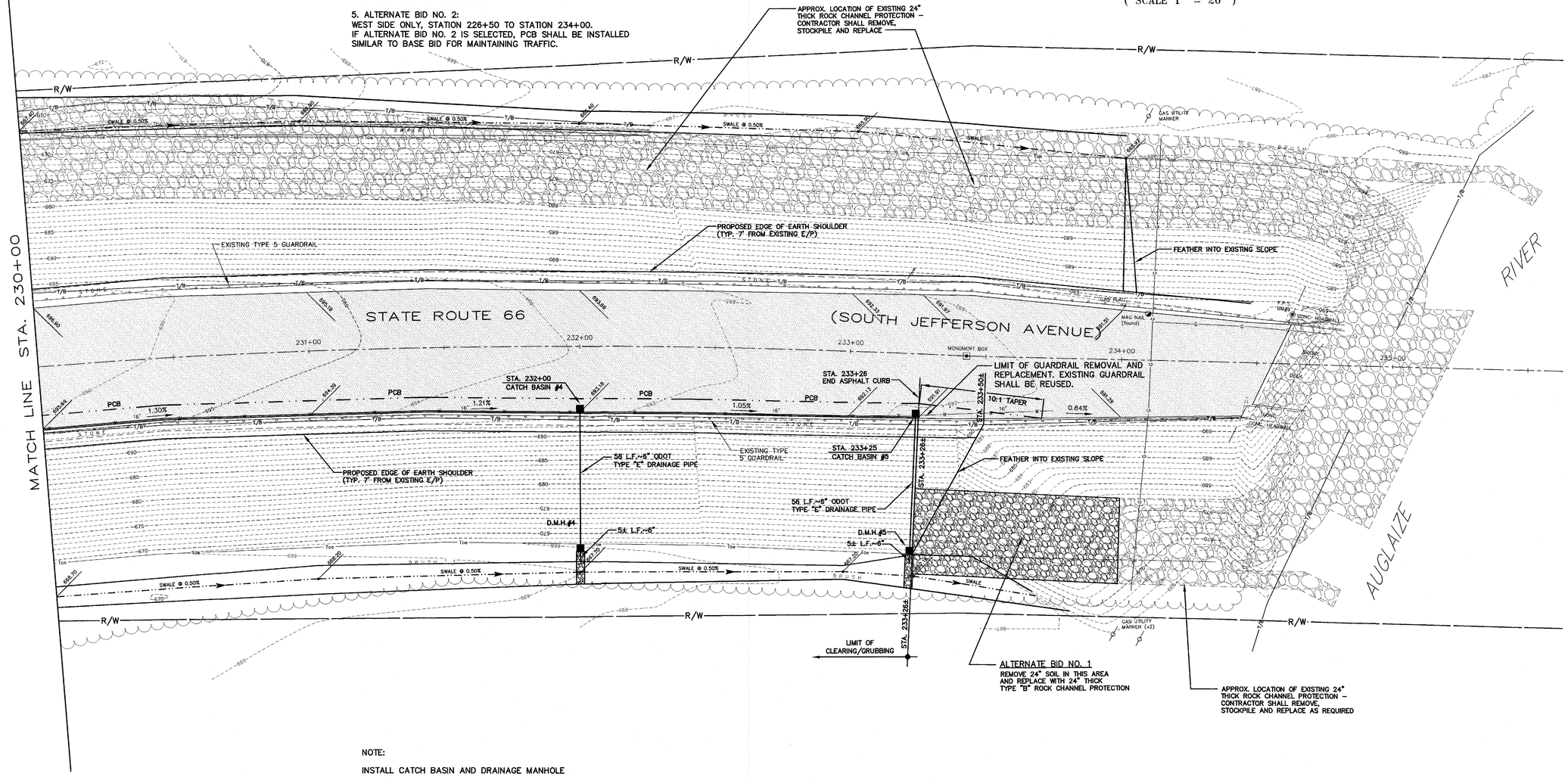
IF ALTERNATE BID NO. 2 IS SELECTED, PCB SHALL BE INSTALLED SIMILAR TO BASE BID FOR MAINTAINING TRAFFIC.

S.R. 66 EMBANKMENT STABILIZATION CITY OF DEFIANCE, OHIO	DRAWN MSB	DATE 07/21/08	3/10
POGGEMEYER DESIGN GROUP, INC. ENGINEERS + ARCHITECTS + PLANNERS	CHECKED	DATE	
	APPROVED	DATE	
	REVISIONS	DATE 07/21/08	

GRAPHIC SCALE

20 0 10 20 40

(SCALE 1" = 20')



NOTE:

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STATE ROUTE 66 – STA. 230+00 TO STA. 235+50

1120-130

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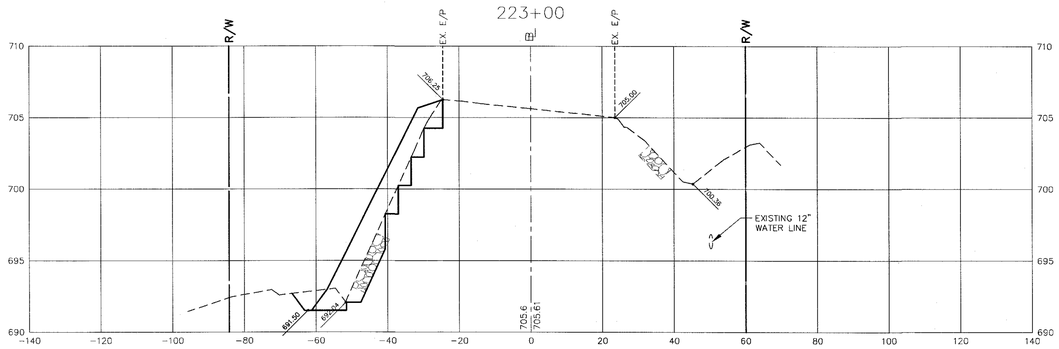
SCALE

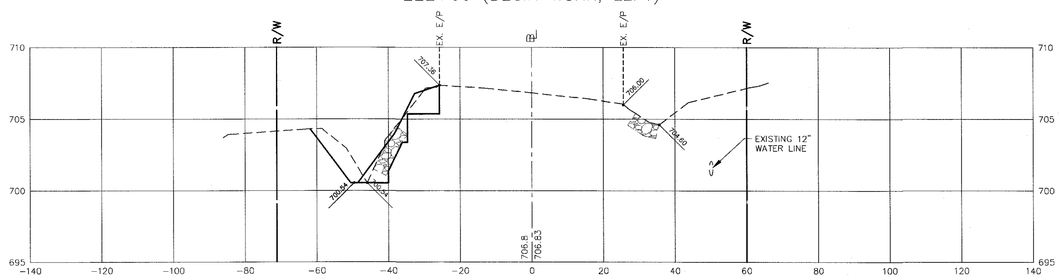
1" = 20' HORIZONTAL
1" = 5' VERTICAL

S.R. 66 EMBANKMENT STABILIZATION CITY OF DEFIANCE, OHIO	DRAWN MSB	DATE 07/21/08	4/10
	CHECKED	DATE	
POGGEMEYER DESIGN GROUP, INC. ENGINEERS + ARCHITECTS + PLANNERS	APPROVED	DATE	
	REVISIONS	DATE 07/21/08	

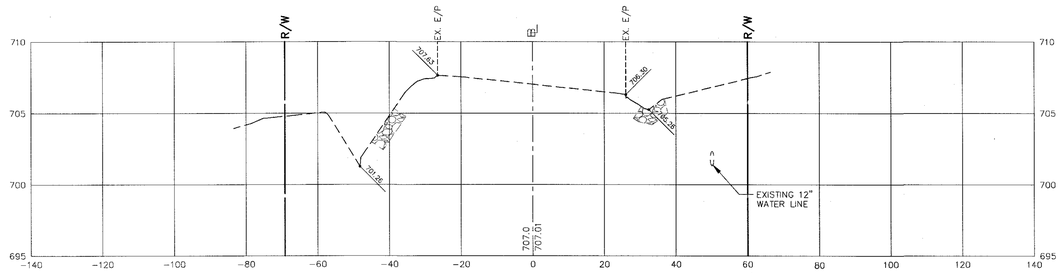
223+00



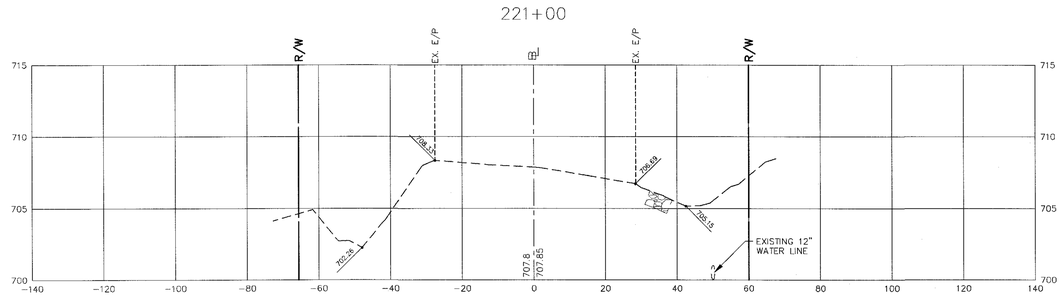
222+00 (BEGIN WORK, LEFT)



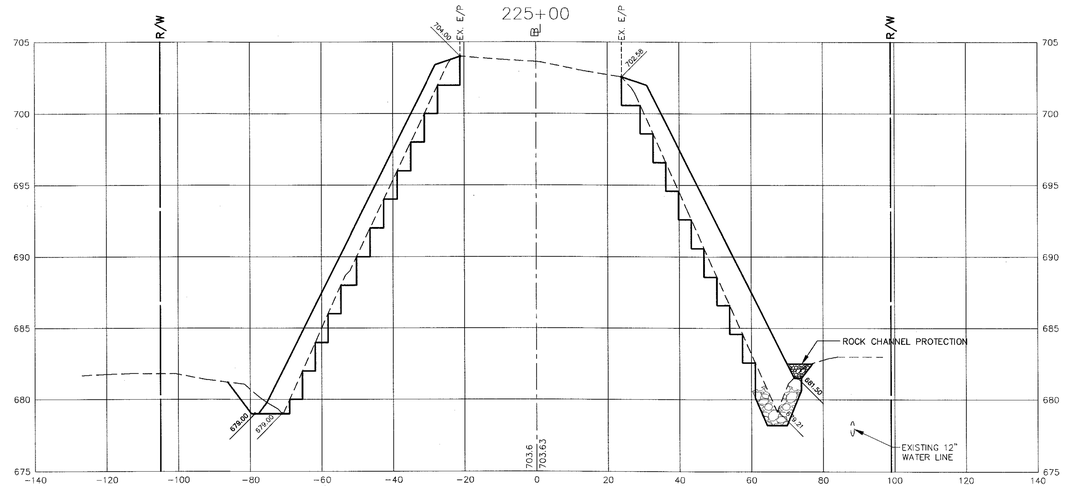
221+76



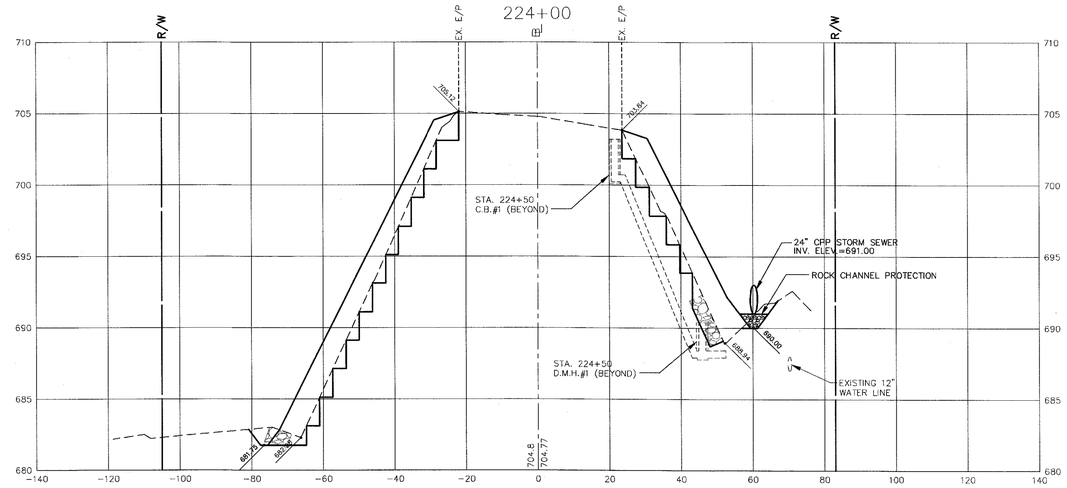
221+00



225+00



224+00



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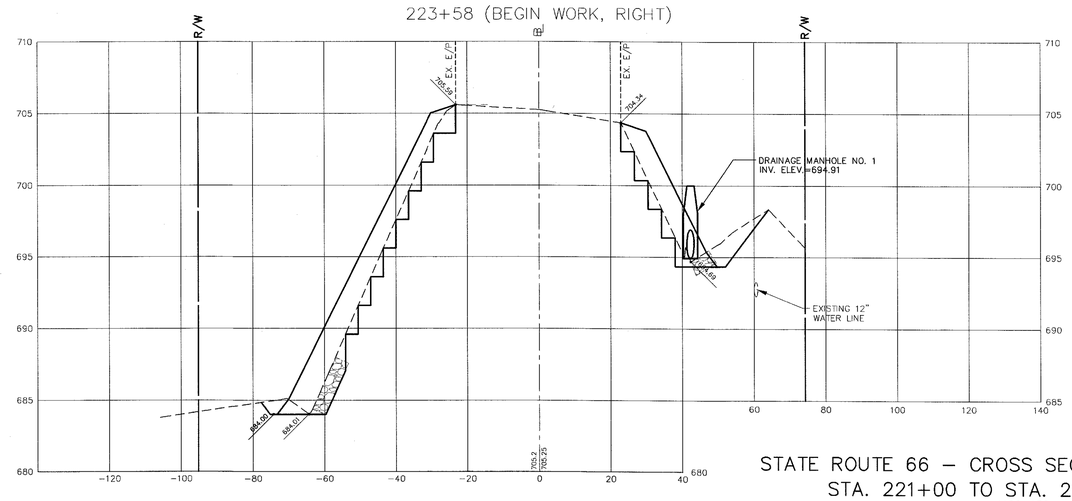

STATE ROUTE 66 – CROSS SECTIONS
STA. 221+00 TO STA. 225+00

1120-130

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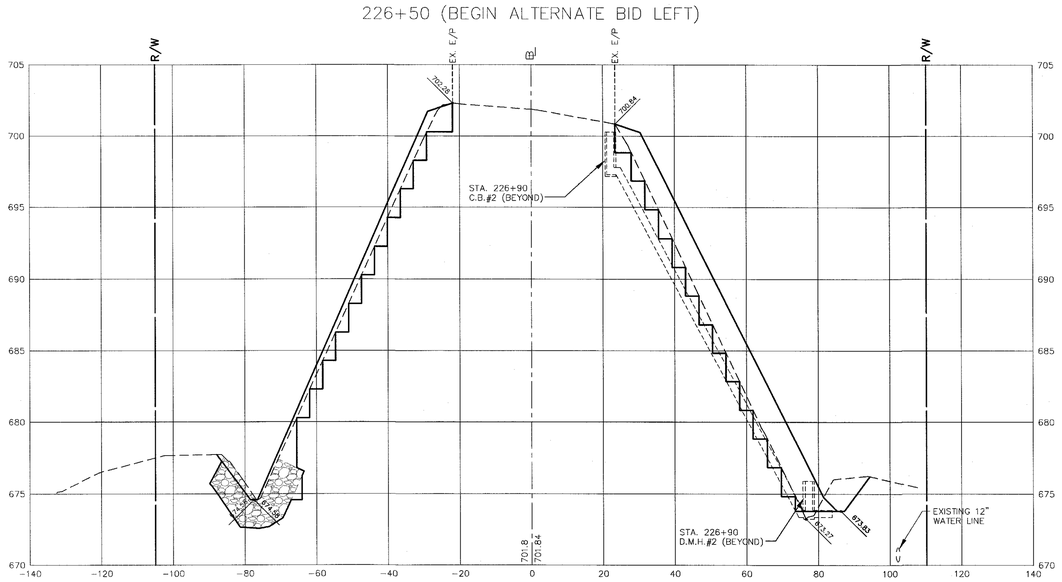
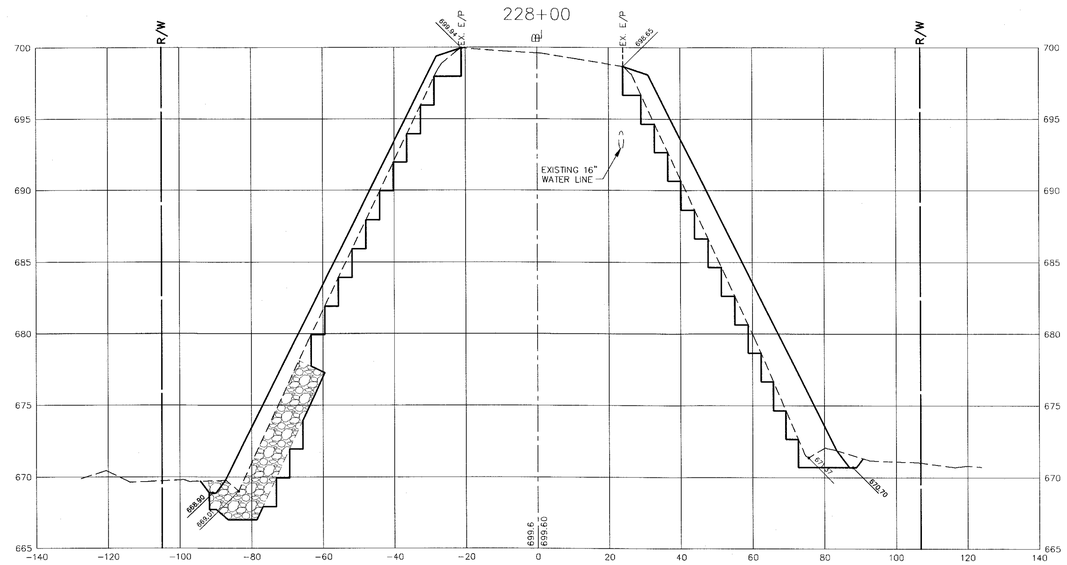
S.R. 66 EMBANKMENT STABILIZATION CITY OF DEFIANCE, OHIO	DRAWN MSB	DATE 07/21/08	5/10
POGGEMEYER DESIGN GROUP, INC. ENGINEERS + ARCHITECTS + PLANNERS	CHECKED	DATE	
	APPROVED	DATE	
	REVISIONS	DATE 07/21/08	

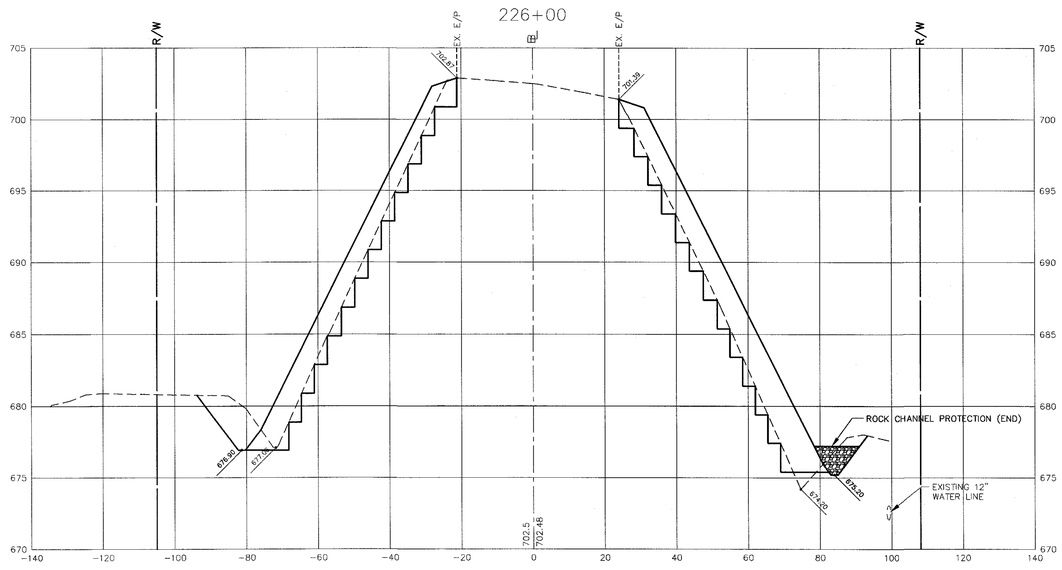
SCALE

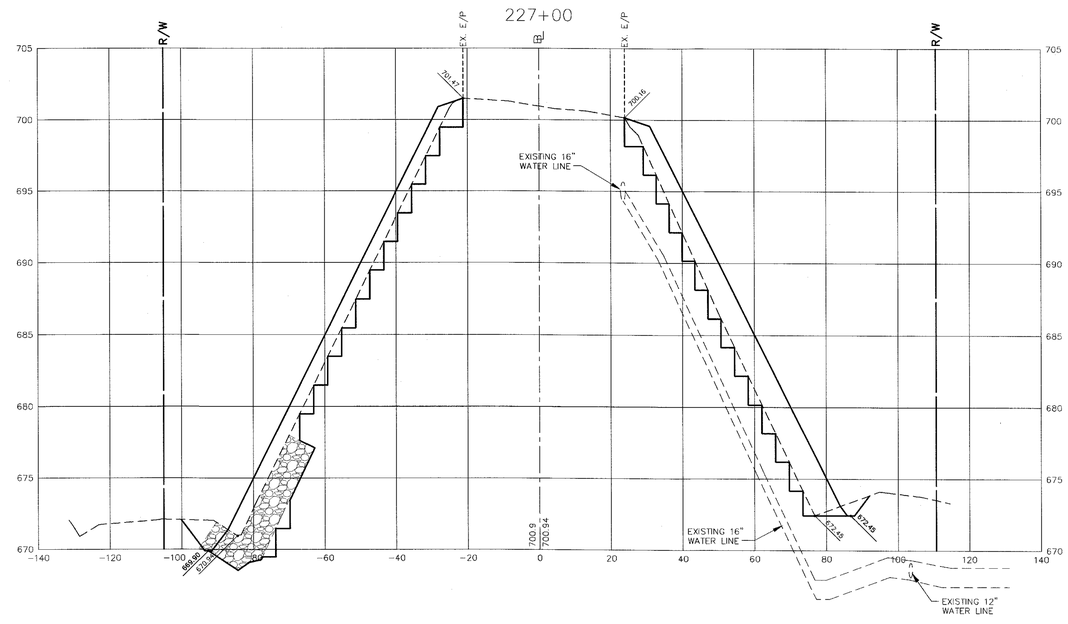
1" = 20' HORIZONTAL

1" = 5' VERTICAL









STATE ROUTE 66 – CROSS SECTIONS
STA. 226+00 TO STA. 228+00

1120-130

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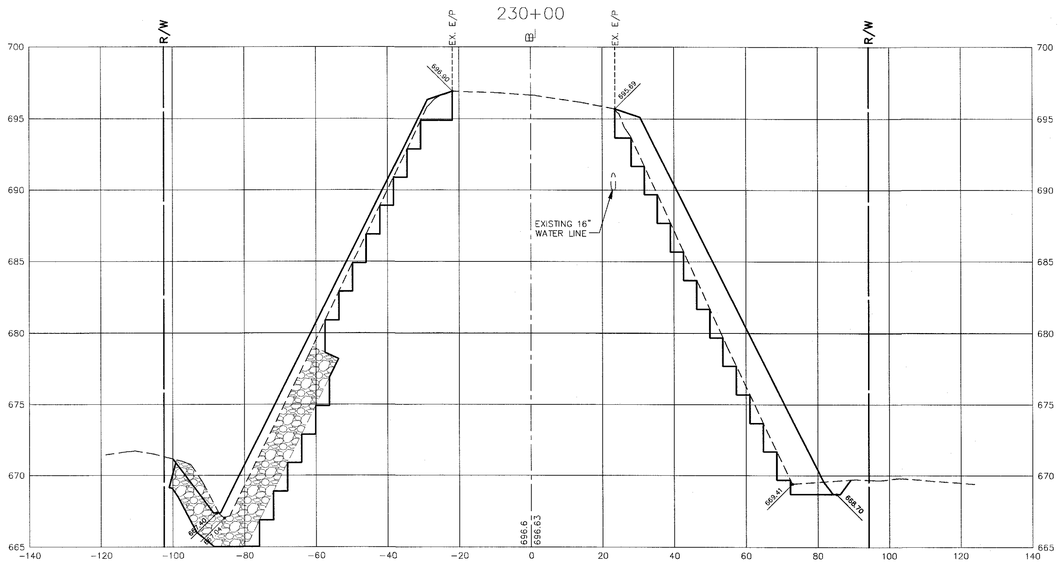
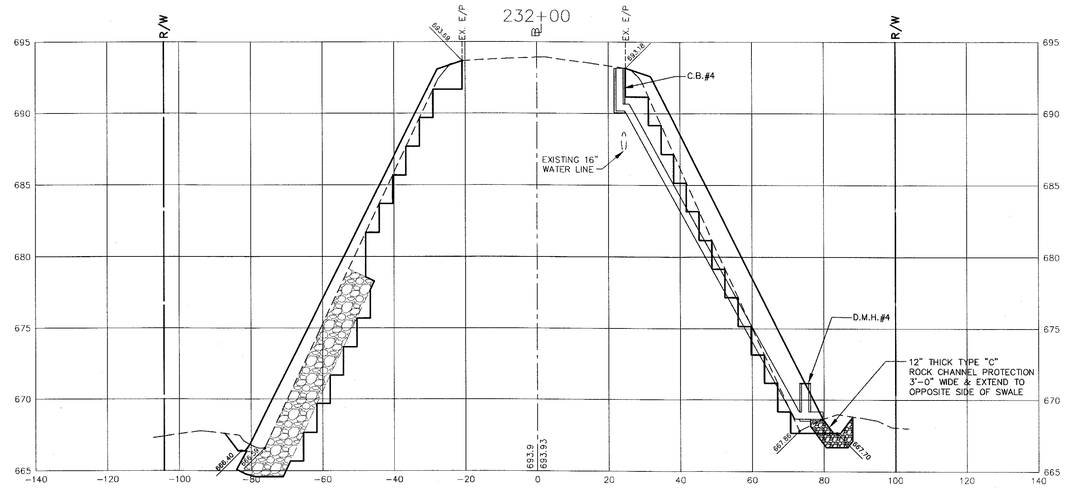
S.R. 66 EMBANKMENT STABILIZATION CITY OF DEFIANCE, OHIO	DRAWN MSB	DATE 07/21/08	6/10
	CHECKED	DATE	
POGGEMEYER DESIGN GROUP, INC. ENGINEERS + ARCHITECTS + PLANNERS	APPROVED	DATE	
	REVISIONS	DATE 07/21/08	

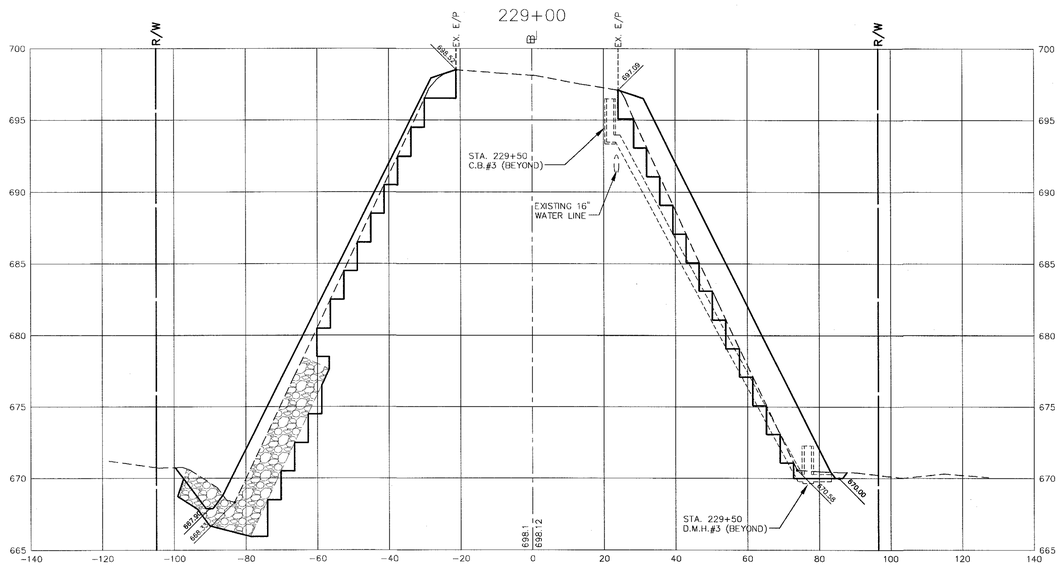
SCALE

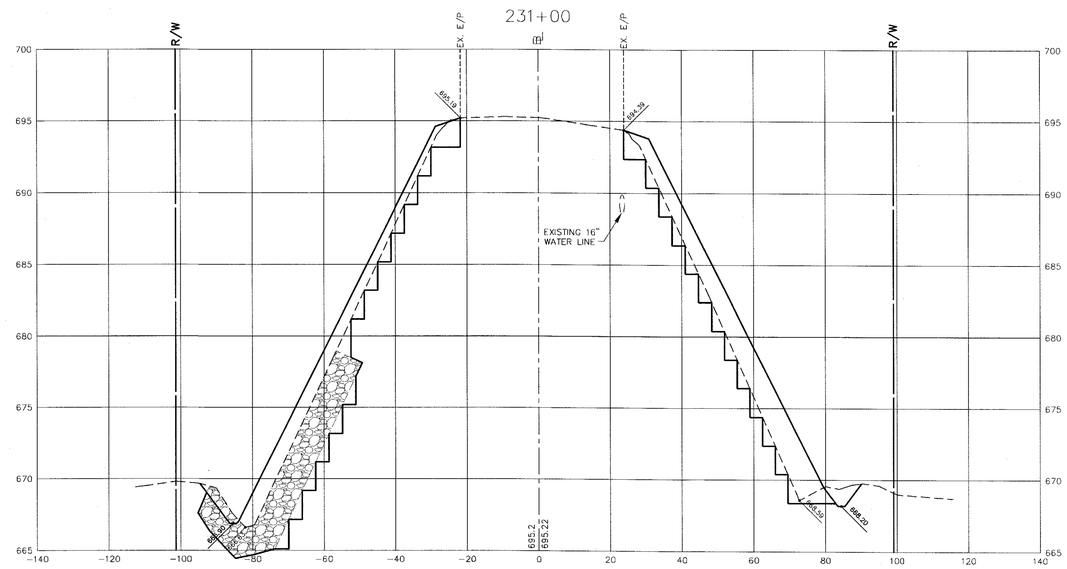
1" = 20' HORIZONTAL

1" = 5' VERTICAL









STATE ROUTE 66 – CROSS SECTIONS
STA. 229+00 TO STA. 232+00

1120-130

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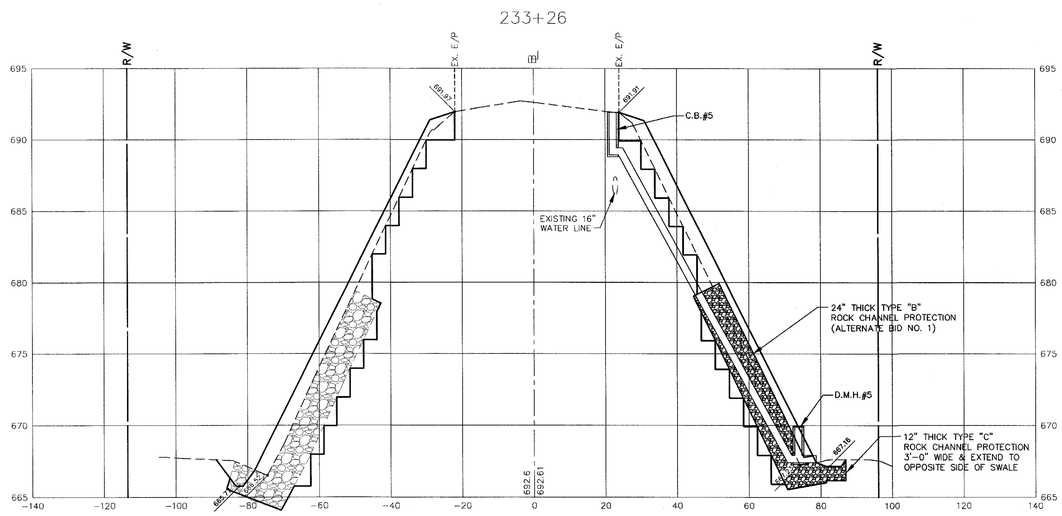
S.R. 66 EMBANKMENT STABILIZATION CITY OF DEFIANCE, OHIO	DRAWN MSB DATE 07/21/08 CHECKED DATE APPROVED DATE REVISIONS DATE 07/21/08	7/10
POGGEMEYER DESIGN GROUP, INC. ENGINEERS + ARCHITECTS + PLANNERS		

SCALE

1" = 20' HORIZONTAL
1" = 5' VERTICAL

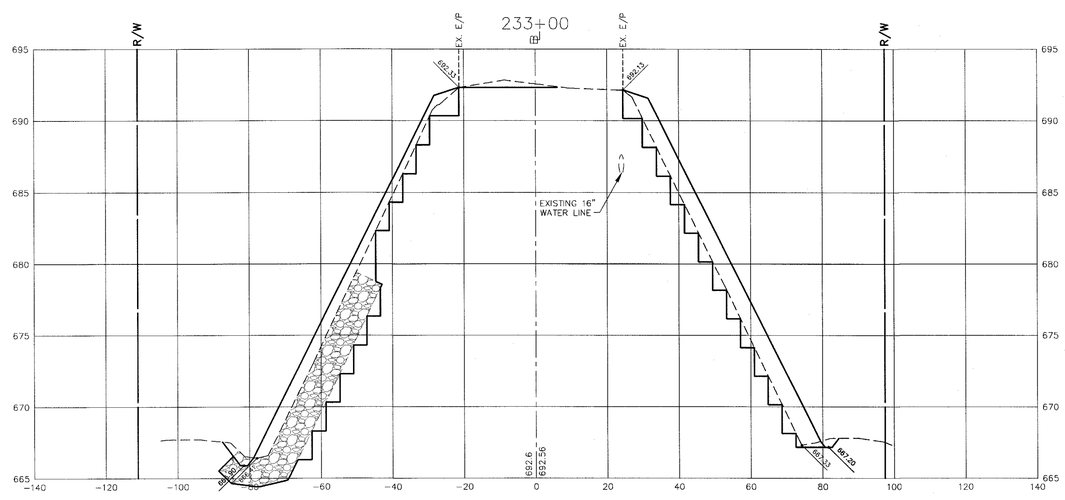


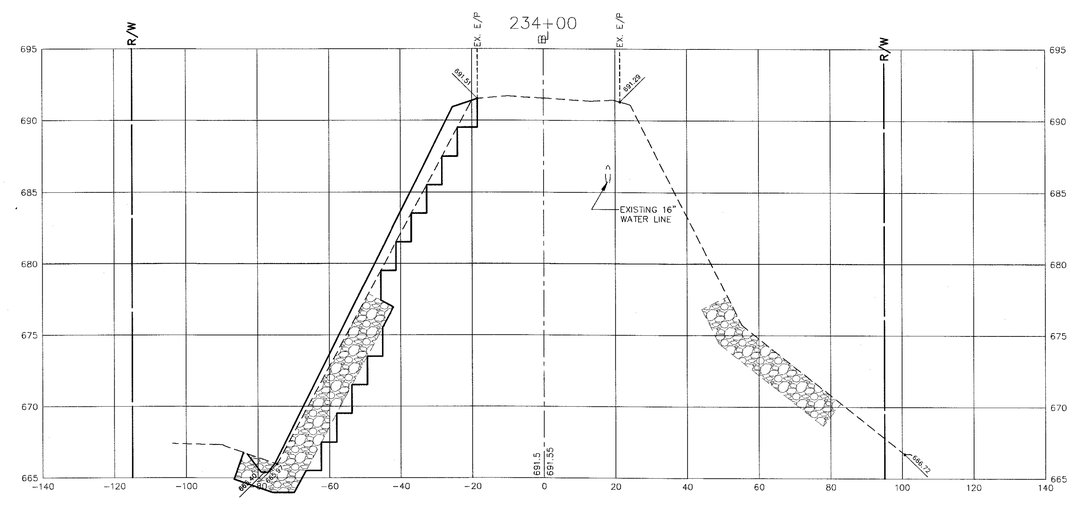
BASE BID VOLUMES	
CUT VOLUME (YDS)	FILL VOLUME (YDS)
3,910 CU./YDS	10,795 CU./YDS

FILL NEEDED = 6,885 CU./YDS

ALT. BID VOLUMES	
CUT VOLUME (YDS)	FILL VOLUME (YDS)
5,556 CU./YDS	7,608 CU./YDS

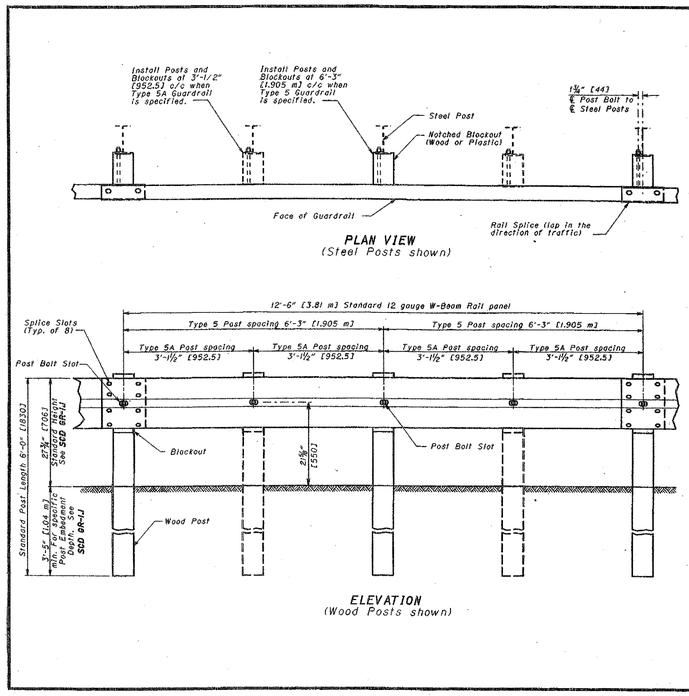
FILL NEEDED = 2,052 CU./YDS





STATE ROUTE 66 – CROSS SECTIONS
STA. 233+00 TO STA. 234+00

1120-130



NOTES

RAIL: Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 606.

POSTS: Posts may be constructed of wood or steel. Wood posts may be round or 6"x8" [150x200] square-sawed.

Use round wood posts on runs of single-sided rail. The round posts shall be 8" ±1 [200±25] in diameter at the top and not more than 3" [75] larger at the butt with a uniform taper.

Fabricate wood posts with square ends. Posts shall be pressure-treated as per CMS 710.14. Bore bolt holes and, if required, trim the tops of posts after the posts are set.

Steel posts are to be W6x9 [W150X13.5] or W6x8.5 [W150x12.6] steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.

All posts are 6'-0" [1830] long unless specified otherwise in the Contract Document. Posts may be set in drilled holes or may be driven to grade.

WELDED BEAM POSTS: Welded beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:

Sec. 7.2 Test reports of tensile properties for each lot shall accompany each shipment.
Sec. 12 Beams that have imperfections repaired by welding shall not be accepted for use in Item 606.
Sec. 13 Random samples shall be tested by the Department from materials delivered to the project site or other locations designated by the Laboratory.

ALTERNATE POSTS: Engineered guardrail posts having met NCHRP 350 criteria, and listed on the **Office of Materials Management's** Approved List are permitted as an equal alternate when installed according to the Manufacturer's Instructions and within the limitations shown on the Approved List.

BLOCKOUTS: Blockout dimensions are dependent on post used. Wood Blockouts are to be pressure treated as specified in CMS 710.14. Bore bolt holes. Approved alternate blockouts may be used in lieu of the wood blockouts shown. The approved list is maintained by the **Office of Materials Management.**

WASHERS: Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

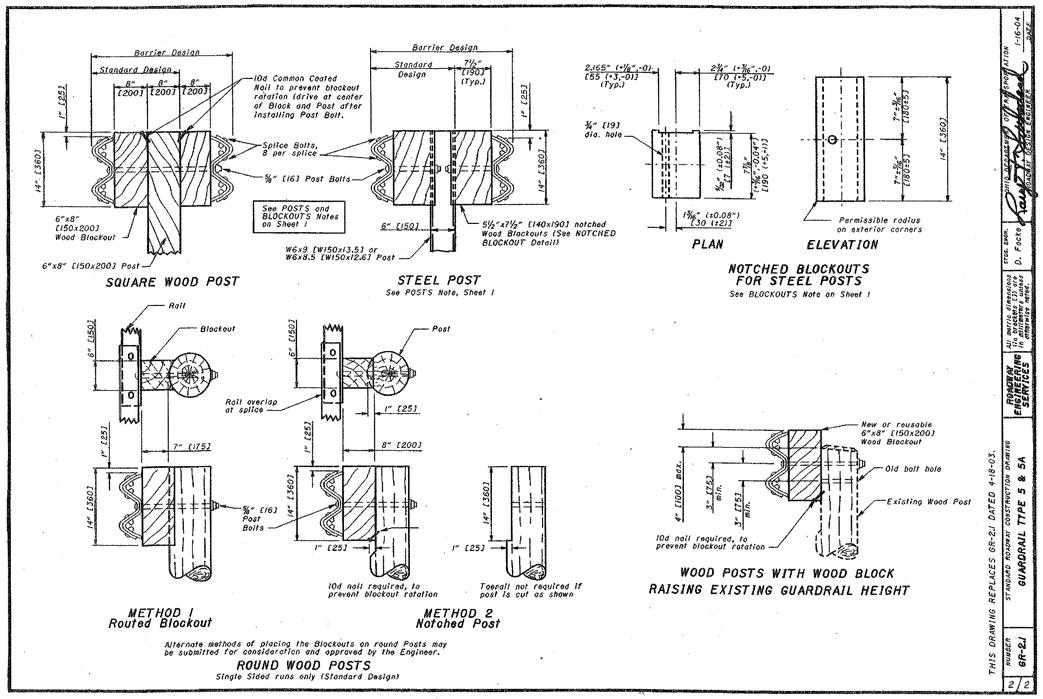
DELINEATION: For barrier reflectors, see CMS 626.

MISCELLANEOUS: For other guardrail details, see **SGD GR-1J.**

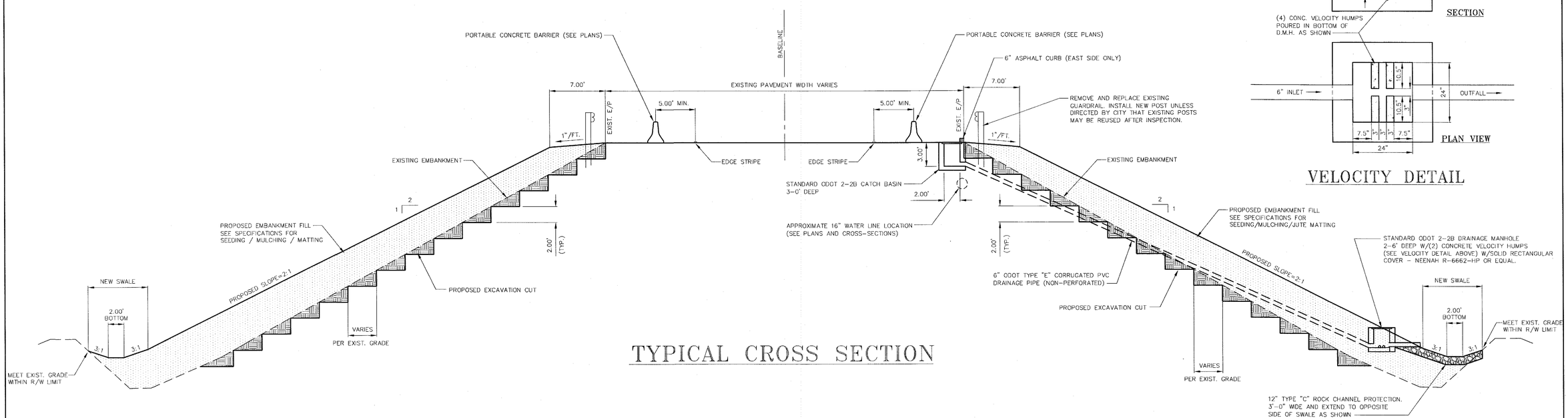
STEEL BEAM POSTS (English)				
Size	Beam depth	Flange width	Flange thickness	Web thickness
Rolled W6x8.5	5.8"	3.94"	0.193"	0.170"
Rolled W6x9	5.9"	3.94"	0.215"	0.170"
Welded 6x8.5	6.0"	3.94"	0.193"	0.170"
Welded 6x9	6.0"	3.94"	0.215"	0.170"

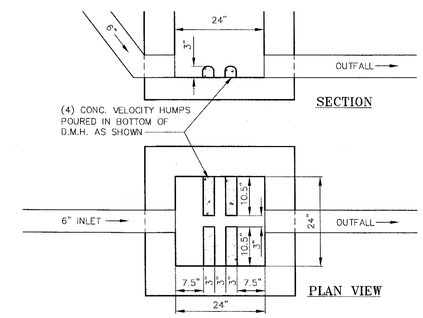
STEEL BEAM POSTS (Metric)				
Size	Beam depth	Flange width	Flange thickness	Web thickness
Rolled W150x12.6	148 mm	100 mm	4.9 mm	4.3 mm
Rolled W150x13.5	150 mm	100 mm	5.5 mm	4.3 mm
Welded 150x12.6	152 mm	100 mm	4.9 mm	4.3 mm
Welded 150x13.5	152 mm	100 mm	5.5 mm	4.3 mm

THIS DRAWING REPLACES GR-2J DATED 4-18-03.
STANDARD ROADWAY CONSTRUCTION DRAWING
GUARDRAIL TYPE 5 & 5A
ROADWAY ENGINEERING SERVICES
All metric dimensions (in brackets) are approximate unless otherwise noted.
NUMBER GR-2J
1/2
TRANS. ENGR. D. Foote
DIRECTOR, PUBLIC TRANSPORTATION 1-16-04 DATE



THIS DRAWING REPLACES GR-2J DATED 4-18-03.
STANDARD ROADWAY CONSTRUCTION DRAWING
GUARDRAIL TYPE 5 & 5A
ROADWAY ENGINEERING SERVICES
All metric dimensions (in brackets) are approximate unless otherwise noted.
NUMBER GR-2J
2/2
TRANS. ENGR. D. Foote
DIRECTOR, PUBLIC TRANSPORTATION 1-16-04 DATE





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DETAIL SHEET

JOB FILE: i drive/1120/130/details.dwg
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ARCHITECTS • ENGINEERS • PLANNERS
935 CLEVELAND AVENUE DEFIANCE, OHIO 43512

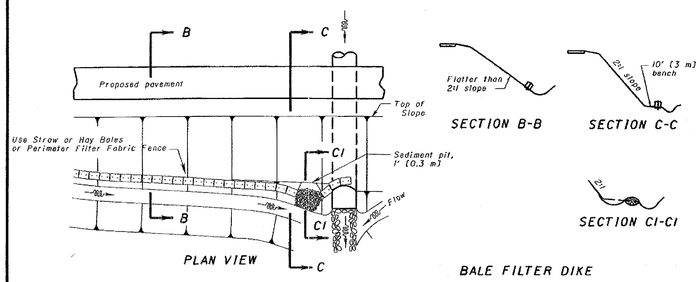
S.R. 66 | SOUTH JEFFERSON AVENUE | SLOPE STABILIZATION
CITY OF DEFIANCE, OHIO

DRAWN BY	CHECKED BY	DATE
MSE	KAM	01/08

REVISION

8 / 10

JOB NUMBER 1120-130



BALE FILTER DIKE

NOTES

MATERIAL: Furnish straw or hay bales. Use 30" [0.8 m] long 2"x2" [50x50] wooden stakes, reinforcing bars or fence posts to stake the bales in place. The use of filter fabric fence in lieu of straw or hay bales will be allowed. Furnish 30" [0.8 m] wide filter fabric with sound wood supports with maximum on-center spacing of 10' [3.0m]. Use filter fabric conforming to 712.09 Type C.

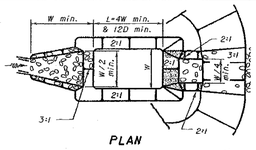
Use sand and gravel for the sediment pit filter material.

CONSTRUCTION: Trench the filter fabric fence as detailed for perimeter filter fabric fence. **(see DM-4.4)**

When straw or hay bales are used conform to the following: Tightly place each bale adjacent to one another. Entrench 2" [50] to 3" [75] into the ground prior to staking. Firmly stake each bale with at least two stakes. Use loose hay or straw to fill the voids under and between the bales.

Construct a 3'x3'x1' [1 m x 1 m x 0.3 m] pit for the sediment pit filter material. Fill with filter material 1' [0.3 m] above ground level.

PAYMENT: The Department will pay for the accepted quantities at the contract prices in feet [meters] as follows: **Item 207 - Bale Filter Dike.**



PLAN

NOTES

MATERIAL: Furnish materials conforming to Item 203 Embankment and Item 601 Rock Channel Protection, Type C or D with filter. Furnish construction fence consisting of 4'-0" [1.3 m] high plastic fence with 6' [2 m] long metal fence posts.

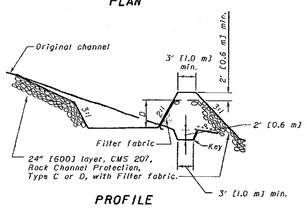
CONSTRUCTION: Construct the Basin and Dams as detailed. Construct the construction fence in urban areas or in high pedestrian traffic areas. Construct the fence to completely surround the sediment basin or dam. Place the fence post on 8' [2.6 m] centers 2' [0.6 m] deep. Securely attach the plastic construction fence to the fence post.

PAYMENT: The Department will pay for the accepted quantities at the contract prices as follows:

Item 207 - Sediment Basins and Dams in cubic yards [cubic meters]

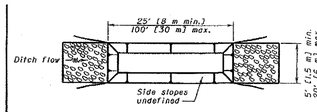
Item 207 - Rock Channel Protection Type C or D with filter in cubic yards [cubic meters]

Item 207 - Construction Fence per foot [meter]

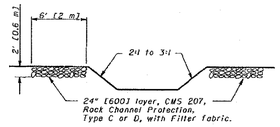


PROFILE

SEDIMENT DAM



PLAN

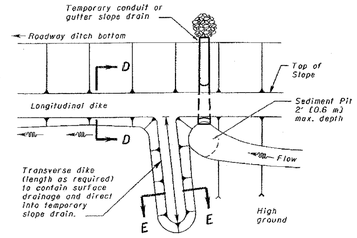


PROFILE

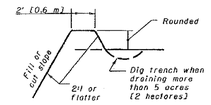
SEDIMENT BASIN

OHIO DEPARTMENT OF TRANSPORTATION — ENGINEER OF BRIDGES — DATE 4-29-99 7-19-02 — HYDRAULIC ENGINEER D. Gruver — All metric dimensions in millimeters unless otherwise noted. — OFFICE OF STRUCTURAL ENGINEERING — STANDARD HYDRAULIC CONSTRUCTION DRAWING — SEDIMENT AND EROSION CONTROLS — NUMBER DM-4.3 — 1/2

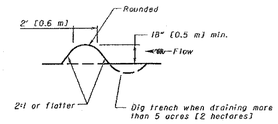
DIKES AND SLOPE PROTECTION



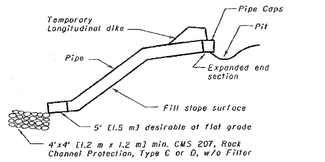
PLAN VIEW



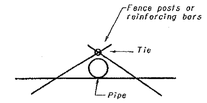
SECTION D-D



SECTION E-E



CONDUIT SLOPE DRAIN



TIE-DOWN SLOPE DRAIN

NOTES

MATERIAL: Furnish materials conforming to Item 203 Embankment and Item 601 Rock Channel Protection, Type C or D, without filter.

Furnish the following for the slope drains: corrugated steel pipe, corrugated or smooth plastic pipe, pipe caps with: holes that comprise at least 30 percent of the cross sectional area of the cap and specifically designed to connect to the pipe, reinforcing bars or fence posts and sand and gravel for the sediment pit filter material.

CONSTRUCTION: Construct as detailed. Compact the dike to 85% of the maximum density as determined by Supplement 1015.

Use reinforcing bars or fence posts to tie down the slope drains and to keep the pipe from moving.

Construct a 3'x3'x2' [1 m x 1 m x 0.6 m] pit for the sediment pit filter material. Fill with filter material to the ground level.

BASIS OF PAYMENT: The Department will pay for the accepted quantities at the contract prices as follows:

Item 207 - Dikes in cubic yards [cubic meters]

Item 207 - Slope Drains in feet [meters]

Item 207 - Rock Channel Protection Type C or D without filter in cubic yards [cubic meters]

TEMPORARY SLOPE DRAINS RECOMMENDED SIZES		
AREA in acres [hectares]	PIPE SIZES	
	Smooth	Corrugated
0-4 [0-1.6]	6" [150]	6" [150]
4-8 [1.6-3.2]	8" [200]	12" [300]
8-12 [3.2-4.9]	10" [250]	15" [375]

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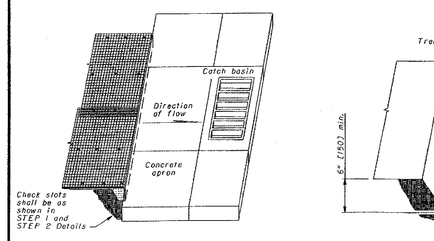
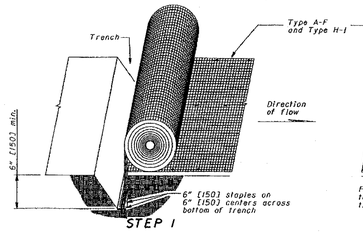
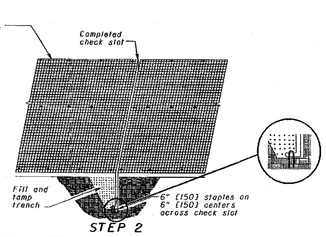
EROSION CONTROL MAT TYPE A-F AND TYPE H-I INSTALLATION



CHECK SLOT AT STRUCTURES

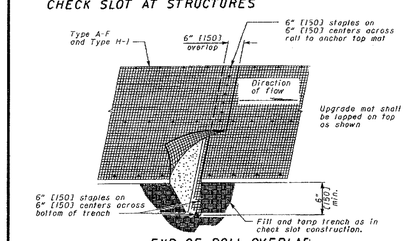


STEP 1

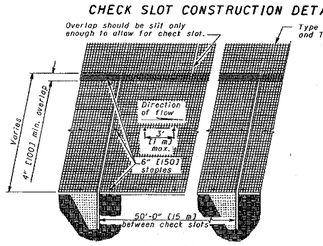


STEP 2

CHECK SLOT CONSTRUCTION DETAILS



END OF ROLL OVERLAP



TYPICAL INSTALLATION

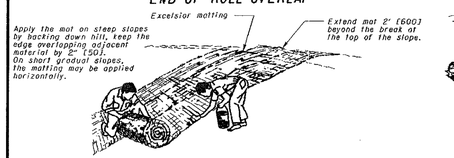
NOTES

GENERAL: The details shown govern the installation of mat Types A-I unless otherwise shown in the plan.

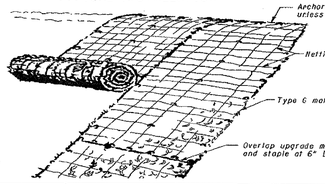
END OF RUN: Use a check slot and staple in the slot as shown in END OF ROLL OVERLAP Detail for mat Type A - F and H-I. When placing matting for ditch protection, start at the downstream end, as shown in the CHECK SLOT AT STRUCTURES Detail.

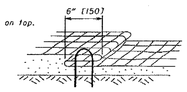
TYPE G MAT: Staple mat as detailed for mat Type A-F and H-I except use staples on 6" [150] centers without a buried end at the roll ends and at 1½" [38] and overlaps. Place a 6" [150] overfold across long rolls at intervals of 50' [15m] or less and staple on 6" [150] centers.

STAPLES: Staples shall be in accordance with CMS 671.02.



EROSION CONTROL MAT TYPE G INSTALLATION





OVERFOLD DETAIL

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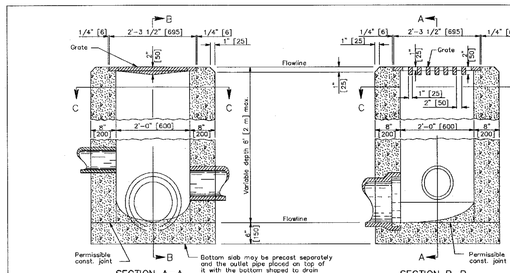

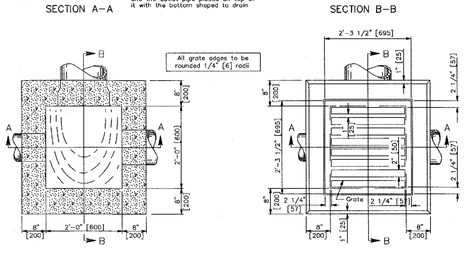

CATCH BASIN No. 2-2B

NOTES

CATCH BASINS 2-2A & B: This sheet depicts Catch Basin 2-2B. See Sheet 1 of 2 for Catch Basin 2-2A.

GRATE: The design shall be essentially the same and equally as strong as the one shown (see construction information table), or meet the requirements of CMS 711.14. Grate openings and dimensions shall not differ from those shown unless otherwise shown in the plans.

If necessary, bicycle safe grates shall be specified in the plans. Bicycle safe grates shall be Neenah No. R-4508-C or East Jordan No. 5110 Type M3 or approved equals.

As of January 1, 2003, the following text shall be cast into the top of the grate:

"DUMP NO WASTE" and"DRAINS TO WATERWAY"

Text shall be printed in bold, capital letters with a minimum height of 1/2". "WATERWAY" may be substituted with "STREAM","RIVER","LAKE", etc. Actual placement and logo may vary per manufacturer.

WALLS: Brick or cast-in-place walls have a nominal thickness of 8" [200]. Precast walls shall have a minimum thickness of 6" [150] and be reinforced sufficiently to permit shipping and handling without damage.

CONCRETE: Cast-in-place concrete is to be Class C. All precast concrete shall meet the requirements of CMS 706.13 and be marked with the catch basin number.

PRECAST BASE: If a precast base is used, it shall be set deep enough so that the top can be placed on the base to provide the grate elevation specified in the plans. Layers of brick shall not be used to adjust the top elevation.

LOCATION AND ELEVATION: When given on the plans, location and elevation are at the top center of the grate. When side openings are provided, the elevation shall be at the flow line of the side inlet.

MINIMUM DEPTH: The minimum depth for CB No. 2-2B shall be the O.D. of the outlet pipe plus 4" [100].

2-2B GRATE ELEVATION: Grate elevation is to be placed 4" to 6" [100 to 150] below normal ditch returning to normal 10' to 15' [3 m to 5 m] each side of inlet.

OPENINGS: Pipe openings shall be the O.D. of the pipe being supplied plus 2" [50] when fabricated or field cut. The interstitial space shall be filled with grout per CMS 601.

PAYMENT: All materials and labor, including excavation and backfilling, shall be paid for under Item 604 - Catch Basin, No 2-2B.

CONSTRUCTION INFORMATION
Minimum weight [mass] of grate, 120 lbs. [54 kg]

CATCH BASIN	OUTLET PIPE SIZE
2-2A	12" to 21" [300 to 525]
2-2B	12" to 21" [300 to 525]

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CITY OF DEFIANCE, OHIO

DRAWN BY MGS	CHECKED BY KAM
DATE 01/08	
REVISION	

9 / 10

JOB NUMBER 1120-130

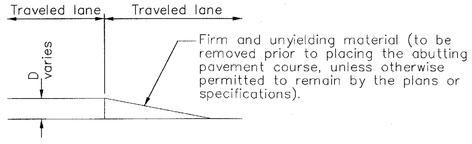
JOB FILE: i drive/1120/130/details.dwg
PRINTED: 07/11/2008

GENERAL NOTES

1. It is intended that this drawing be used for treatment of drop–offs that develop during construction operations, and that are not otherwise provided for in the construction plans. The suggested treatments are intended for high volume projects that will last at least seven days and have an active work zone 1 mile [1.6 km] or less in length. For guidance on the use of this sheet, see L&D Manual Volume One, Section 500. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop–off treatments specified hereon, they shall be included for payment in the lump sum bid for Item 614 – Maintaining Traffic.
2. While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
3. In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
4. The drop–off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
5. Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing RM–4.2 and Item 622.
6. When drums are specified for a drop–off condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
7. When W8–9 (Low Shoulder) signs or W8–9a (Shoulder Drop –Off) signs or W8–11 (Uneven Lanes) signs are required, they shall be placed 750 feet [230 m] in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all inter secting roadways within the limits of the condition. When the drop–off condition extends more than 0.5 mile [800 m], additional signs should be erected at intervals of 1.0 mile [1600 m] or less.
8. For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate a difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
9. Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10 feet [3.0 m], drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5 inches [125] and approval is granted by the Project Engineer.
10. Pavement Repairs (or similar work):
    a. Lengths greater than 60 feet [18 m] – utilize appropriate treatment from Condition I.
    b. Lengths of 60 feet [18 m] or less – repairs shall be effected in accordance with CMS 255.08. Drums may be used as a separtor adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT
(MILLING OR RESURFACING)

1. This treatment may be used when permitted for Condition I only.
2. W8–11 sign required.

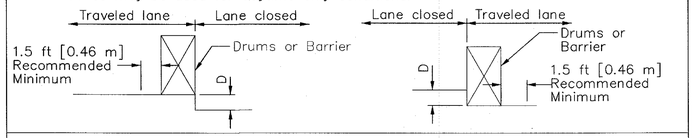


CONDITION I
DROP–OFFS BETWEEN TRAVELED LANES

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

D – inches (mm)	Treatment
≤1–1/2 [≤40]	Erect W8–11 sign.
1–1/2 – 3 [40–75]	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
> 3 – 5 [>75–125]	Lane closure utilizing drums as shown below.
> 5 [>125]	Lane closure utilizing portable concrete barrier as shown below.

* Cones may be used for daytime only conditions.

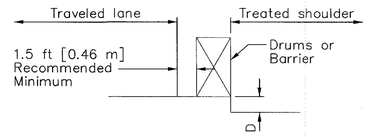


CONDITION II
DROP–OFFS WITHIN GRADED SHOULDER AREA

1. The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
2. The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials or concrete). For the purpose herein, its maximum width shall be considered to be 12 feet [3.6 m].

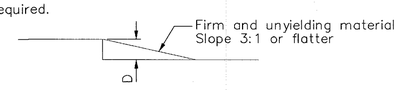
D – inches (mm)	Treatment
< 1–1/2 [<40]	1) Erect W8–9a signs.
> 1–1/2 – 5 [>40–125]	1) If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If minimum. lane width* requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
> 5 –12 [125–305] Daylight only	If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below.
> 5 – 24 [>125–610]	1) If minimum lane width* requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums.
> 24 [> 610]	Lane closure utilizing portable concrete barrier as shown below.

* Minimum lane widths shall be 10 ft [3.0 m] unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

1. This treatment may not be used within a bitumunos shoulder where a hot longitudnal joint per CMS 401.15 is required.
2. W8–9 signs required.

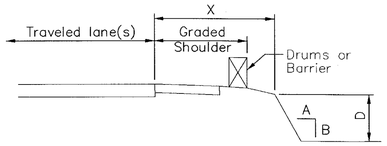


CONDITION III
DROP–OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

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

CHART A

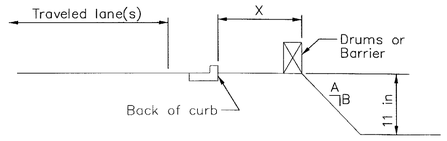
USE FOR: 1. Uncurbed Facilities
2. Curbed Facilities, where:
a. Curbs are less than 6 inch [150] in height
b. Curbs are 6 inch [150] or greater in height and the legal speed is greater than 40 mph [70 km/hr].



X feet (m)	D inch (mm)	A/B	Treatment Required	
			Day	Night
0 – 4 [0 – 1.2]	Any	Any	(a)	(a)
4 – 30 [1.2 – 9.1]	Any	3:1 or Flatter	None	None
4 – 12 [1.2 – 3.6]	≤ 3 [≤ 75]	Steeper than 3:1	None	None
4 – 12 [1.2 – 3.6]	> 3 – < 12 [> 75 – < 305]	Steeper than 3:1	Drums	Drums
4 – 12 [1.2 – 3.6]	> 12 [> 305]	Steeper than 3:1	Drums	Barrier
> 12 – 20 [> 3.6 – 6.1]	< 12 [< 305]	Steeper than 3:1	None	None
> 12 – 20 [> 3.6 – 6.1]	> 12 – 24 [> 305 – < 610]	Steeper than 3:1	Drums	Drums
> 12 – 20 [> 3.6 – 6.1]	> 24 [> 610]	Steeper than 3:1	Drums	Barrier
> 20 – 30 [> 6.1 – 9.1]	< 24 [< 610]	Steeper than 3:1	None	None
> 20 – 30 [> 6.1 – 9.1]	> 24 [> 610]	Steeper than 3:1	Drums	Barrier
> 30 [> 9.1 m]	Any	Any	None	None
(a) Use treatment specified under Condition II.				

CHART B

USE FOR: Curbed facilities, where the curb is 6 inches [150 mm] or greater in height and the legal speed is 40 mph [70 km/h] or less.



X feet (m)	D inch (mm)	A/B	Treatment Required	
			Day	Night
0 – 10 [0–3.0 m]	< 12 [< 305]	Any	None	Drums
0 – 10 [0–3.0 m]	> 12 [> 305]	Any	Drums	Drums
> 10 [> 3.0 m]	Any	Any	None	None

OFFICE OF TRAFFIC ENGINEERING

P/S NUMBER	REVISION DATE	DESIGNED
2010190	11/27/06	REVIEWED LAM
	CHECKED	

PLAN INSERT SHEET
DROP OFFS IN WORK ZONES

1 / 1

POGGEMEYER DESIGN GROUP, INC.
ARCHITECTS • ENGINEERS • PLANNERS
935 CLEVELAND AVENUE DEFIANCE, OHIO 43512

S.R. 66 I SOUTH JEFFERSON AVENUE I SLOPE STABILIZATION
CITY OF DEFIANCE, OHIO

DATE 01/08
CHECKED BY KAM
DRAWN BY MSB
REVISION

10 / 10
JOB NUMBER 1120–130

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MAINTENANCE OF TRAFFIC DROPOFFS IN WORK ZONE DETAILS

JOB FILE: i drive/1120/130/details.dwg
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