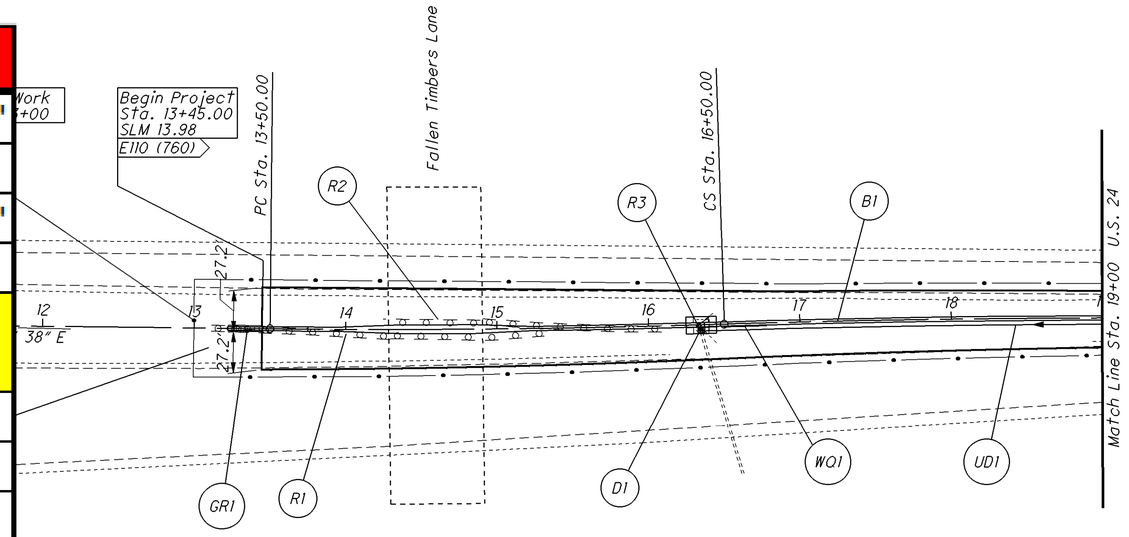
Project 220256 Inlet Modifications.
Drawn by B.French May 11, 2024.

Bench Marks					
Name	Description	Elevation	Station, Offset	Northing	Easting
BM1	5/8" IPIN	629.610	16+26.97, 147.38' Rt.	685068.1630	1639250.6070
BM2	1/2" IPIN	635.400	23+15.80, 68.24' Rt.	685614.2140	1639668.5500

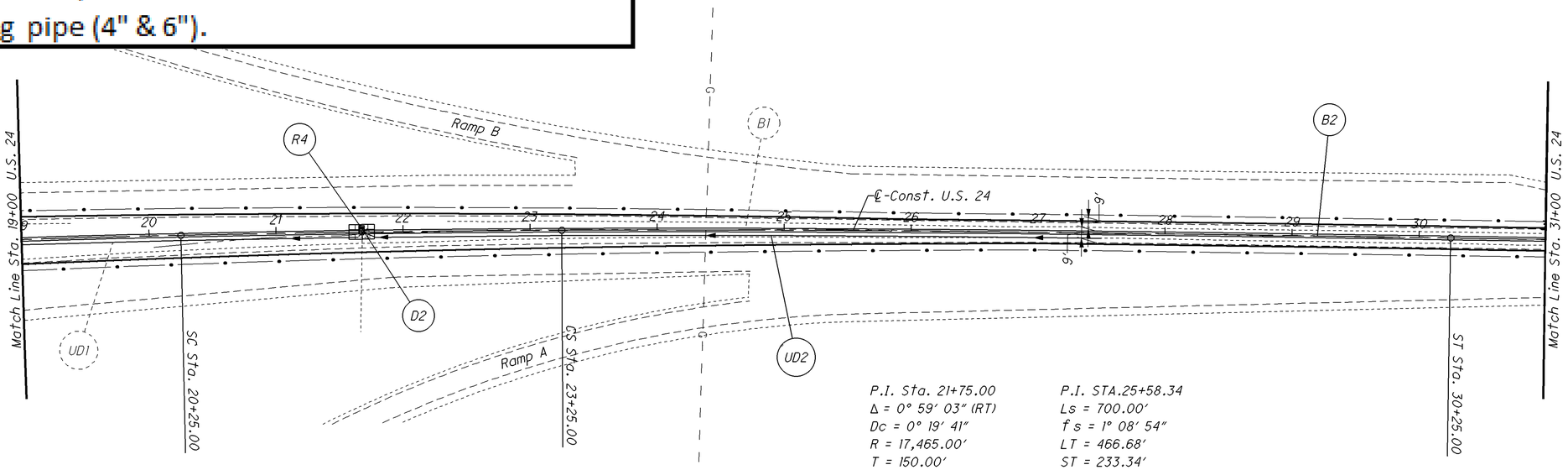
Sta.		Inlet FL	Out FL	Basin Ht.	***
111+05.56	D21	635.05	629.10	5.95	South + 4"
103+60.00	D19	638.40	634.65	3.75	South
95+54.88	D16	637.53	632.34	5.19	South + 6"
89+54.81	D14	646.05	640.03	6.02	North
I475 BRIDGE					
74+05.34	D13	646.06	639.92	6.14	North
69+30.00	D12	638.83	634.50	4.33	North
68+80.00	D11	638.60	634.76	3.84	North
52+22.38	D7	632.16	627.00	5.16	North
42+22.97	D4	634.90	630.29	4.61	North

*** The side where the attached basin will go is shown. These are all oopsite the outlet. Two will need a hole for an incomig pipe (4" & 6").



P.I. Sta. 15+00.02
Δ = 2° 27' 20" (LT)
Dc = 0° 49' 07"
R = 7,000.00'
T = 150.02'
L = 300.00'
E = 1.61'
C = 299.98'
C.B. = N 43° 28' 58" E

P.I. STA.18+10.79
Ls = 375.00'
f s = 2° 08' 59"
LT = 214.26'
ST = 160.79'
x = 374.93'
y = 6.03'
k = 187.49'
p = 0.50'



P.I. Sta. 21+75.00
Δ = 0° 59' 03" (RT)
Dc = 0° 19' 41"
R = 17,465.00'
T = 150.00'
L = 300.00'
E = 0.64'
C = 300.00'
C.B. = N 44° 53' 49" E

P.I. STA.25+58.34
Ls = 700.00'
f s = 1° 08' 54"
LT = 466.68'
ST = 233.34'
x = 699.97'
y = 4.68'
k = 350.00'
p = 1.17'

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED
CHECKED

PLAN - U.S. 24
STA. 10+00 TO STA. 31+00

LUC-24-13.98

10
22

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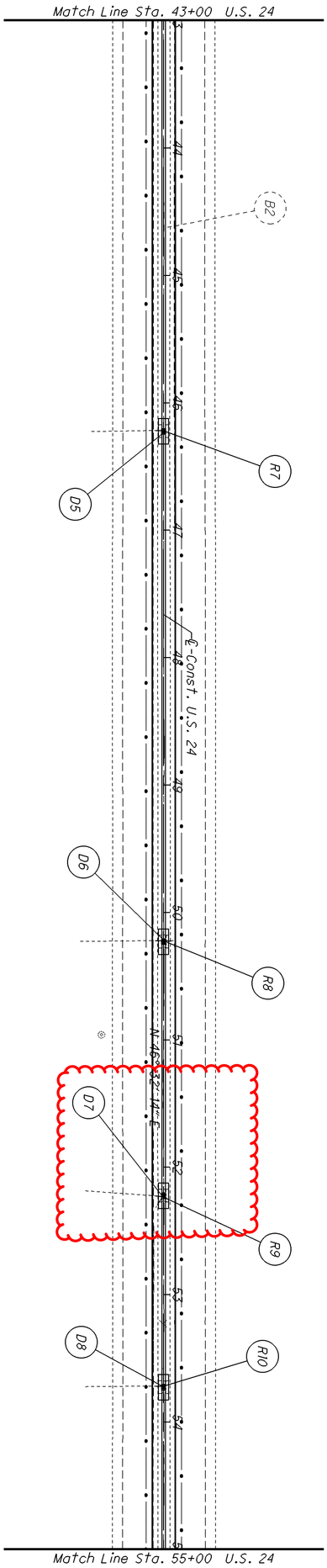
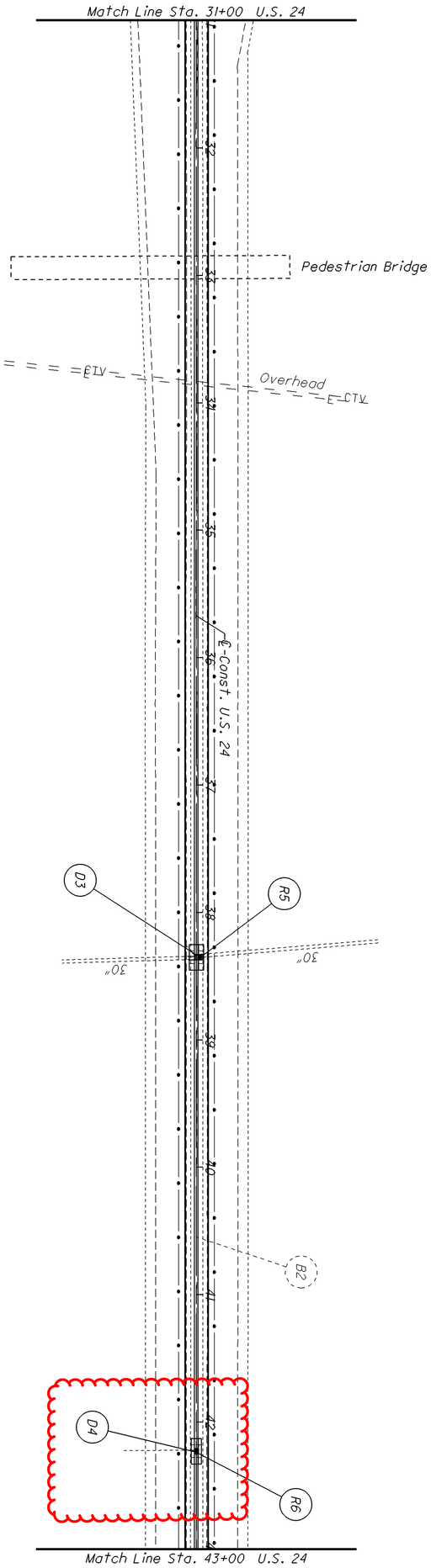
Bench Marks

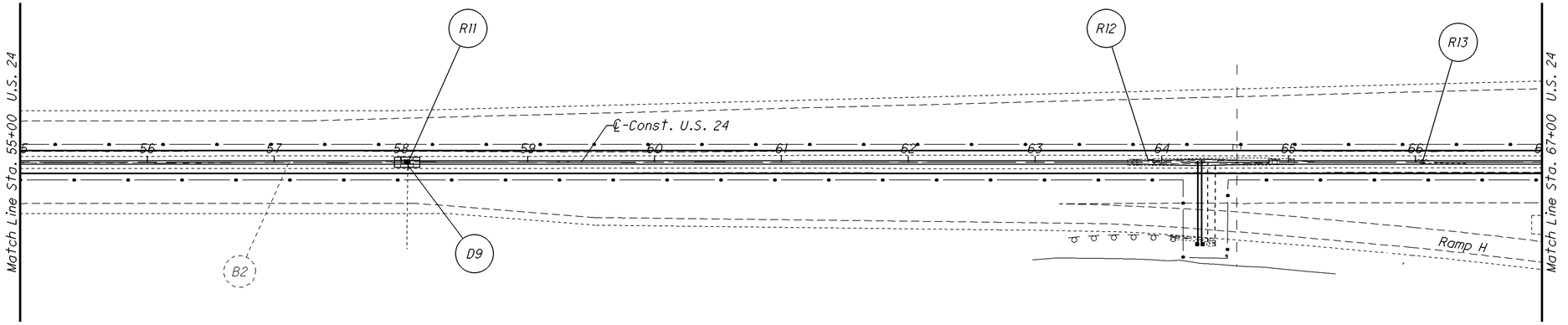
Name	Description	Elevation	Station, Offset	Northing	Easting
BM3	5/8" IPIN	638.122	34+89.15, 265.26' Rt.	686280.8770	1640651.3400
BM4	5/8" IPIN	634.759	49+94.48, 69.80, Lt.	687559.5610	1641513.4570

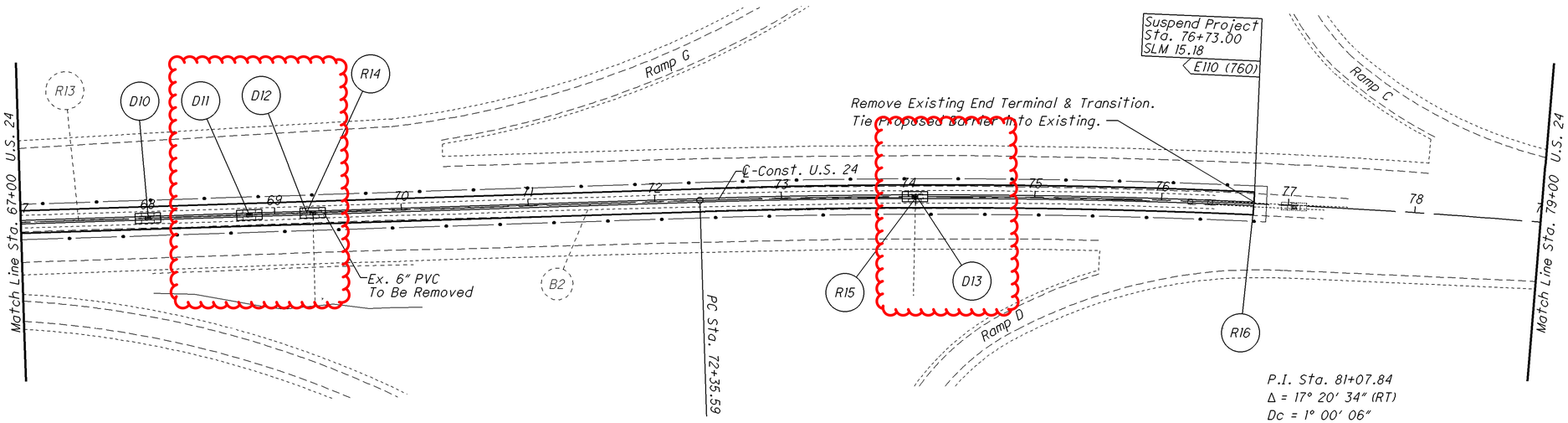




11 / 22	LUC-24-13.98	PLAN - U.S. 24 STA. 31+00 TO STA. 55+00	CALCULATED CHECKED 0 25 50 100 HORIZONTAL SCALE IN FEET

Bench Marks					
Name	Description	Elevation	Station, Offset	Northing	Easting
BM4	5/8" IPIN	634.759	49+94.48, 69.80, Lt.	687559.5610	1641513.4570
BM5	5/8" IPIN	636.520	64+24.93, 133.63' Rt.	688395.8980	1642691.6450





P.I. Sta. 81+07.84
Δ = 17° 20' 34" (RT)
Dc = 1° 00' 06"
R = 5,719.25'
T = 872.25'
L = 1,731.16'
E = 66.13'
C = 1,724.56'
C.B. = N 55° 12' 31" E

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED | CHECKED

PLAN - U.S. 24
STA. 55+00 TO STA. 79+00

LUC-24-13.98

12
22

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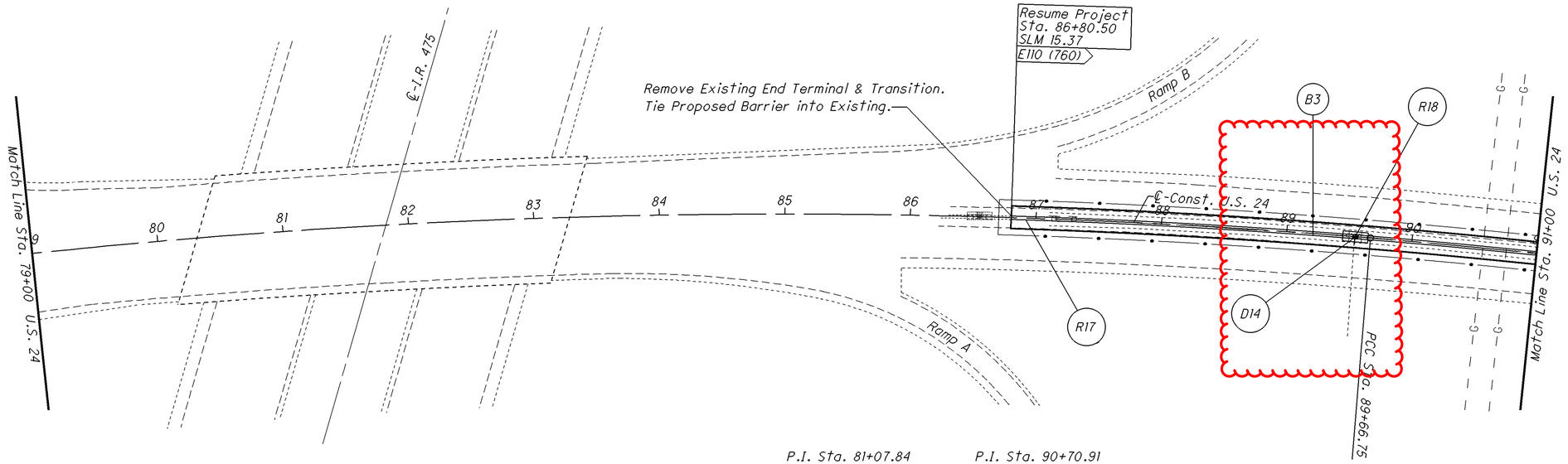
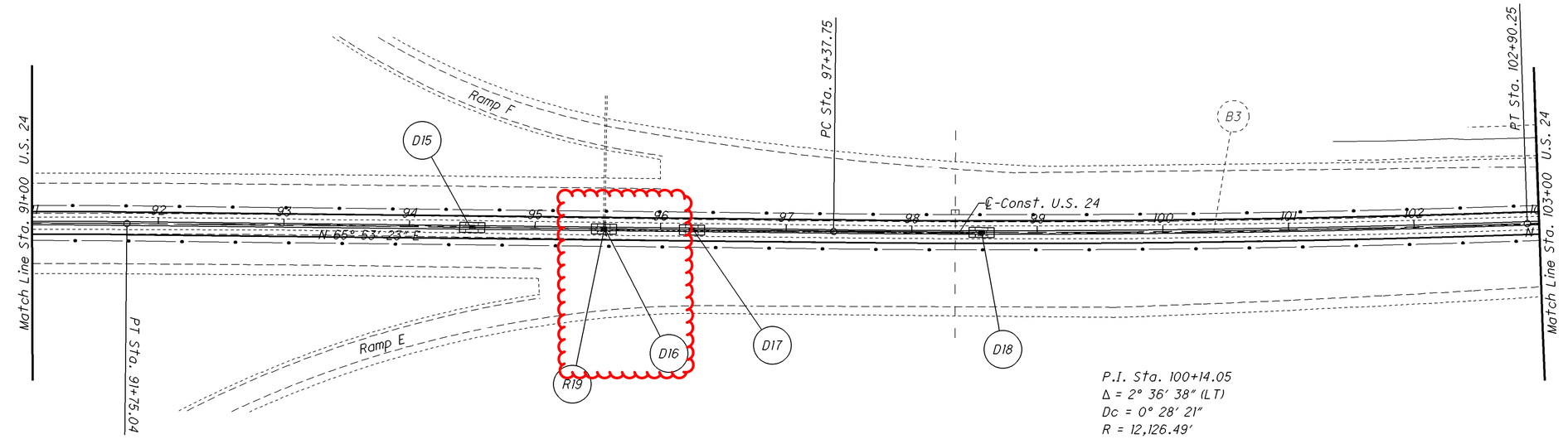
Bench Marks

Name	Description	Elevation	Station, Offset	Northing	Easting
BM5	5/8" IPIN	636.520	64+24.93, 133.63' Rt.	688395.8980	1642691.6450
BM6	5/8" IPIN	635.858	102+09.16, 87.84' Lt.	690632.4130	1645694.0560



P.I. Sta. 81+07.84
Δ = 17° 20' 34" (RT)
Dc = 1° 00' 06"
R = 5,719.25'
T = 872.25'
L = 1,731.16'
E = 66.13'
C = 1,724.56'
C.B. = N 55° 12' 31" E

P.I. Sta. 90+70.91
Δ = 2° 00' 35" (RT)
Dc = 0° 57' 53"
R = 5,938.48'
T = 104.16'
L = 208.29'
E = 0.91'
C = 208.28'
C.B. = N 64° 53' 05" E



P.I. Sta. 100+14.05
Δ = 2° 36' 38" (LT)
Dc = 0° 28' 21"
R = 12,126.49'
T = 276.29'
L = 552.49'
E = 3.15'
C = 552.44'
C.B. = N 64° 35' 04" E

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED
CHECKED

PLAN - U.S. 24
STA. 79+00 TO STA. 103+00

LUC-24-13.98

13
22

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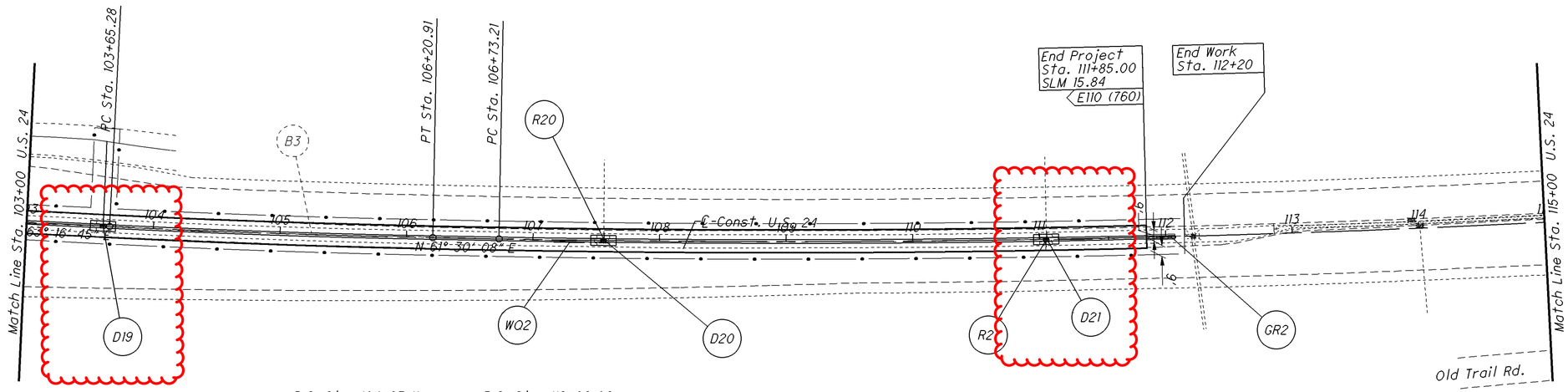
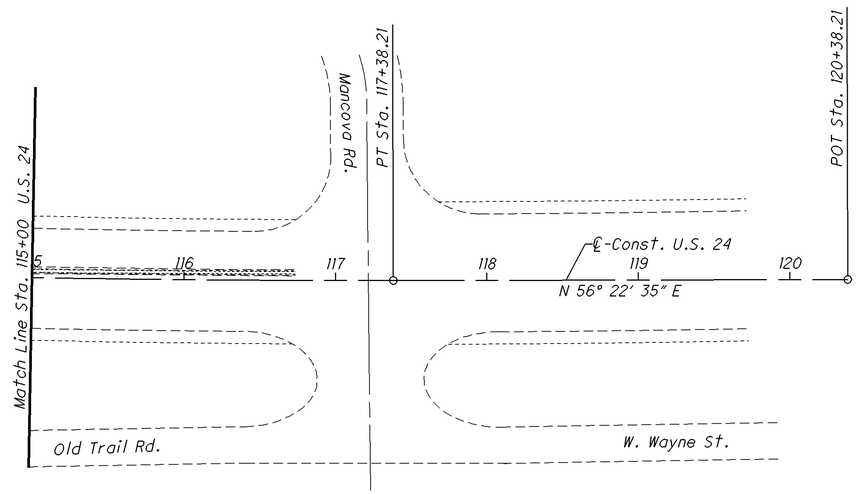
Bench Marks

Name	Description	Elevation	Station, Offset	Northing	Easting
BM6	5/8" IPIN	635.858	102+09.16, 87.84' Lt.	690632.4130	1645694.0560
BM7	PK	635.475	113+05.95, 4.18' Lt.	691087.1500	1646690.6760



P.I. Sta. 104+93.11
Δ = 1° 46' 37" (LT)
Dc = 0° 41' 42"
R = 8,242.76'
T = 127.82'
L = 255.63'
E = 0.99'
C = 255.62'
C.B. = N 62° 23' 27" E

P.I. Sta. 112+06.06
Δ = 5° 07' 33" (LT)
Dc = 0° 28' 53"
R = 11,904.32'
T = 532.86'
L = 1,065.00'
E = 11.92'
C = 1,064.64'
C.B. = N 58° 56' 22" E



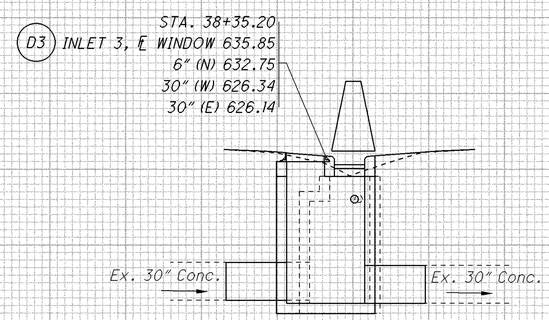
HORIZONTAL SCALE IN FEET
0 25 50 100

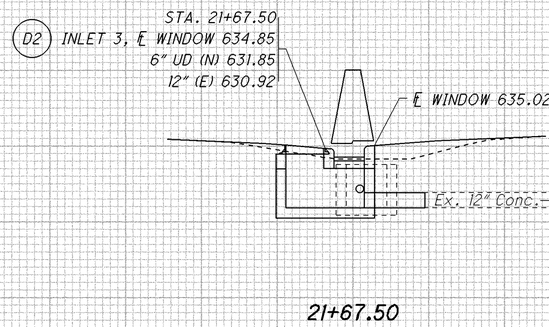
CALCULATED | CHECKED

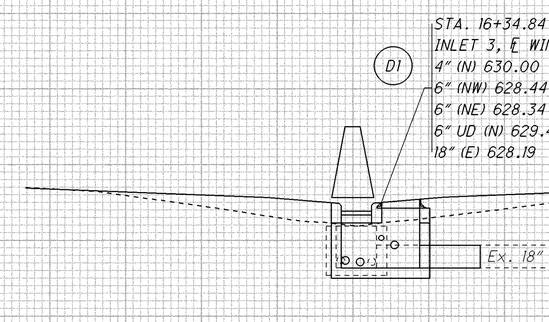
PLAN - U.S. 24
STA. 103+00 TO STA. 120+38.21

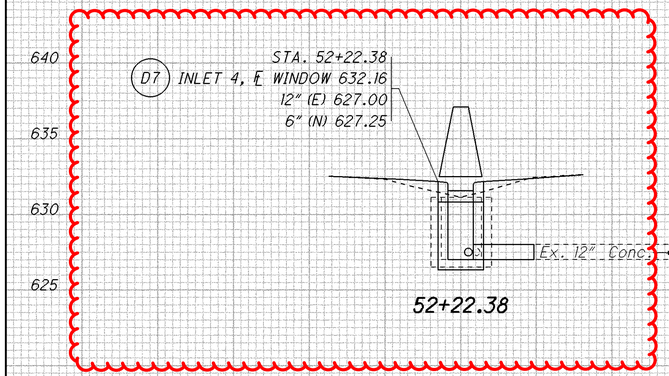
LUC-24-13.98

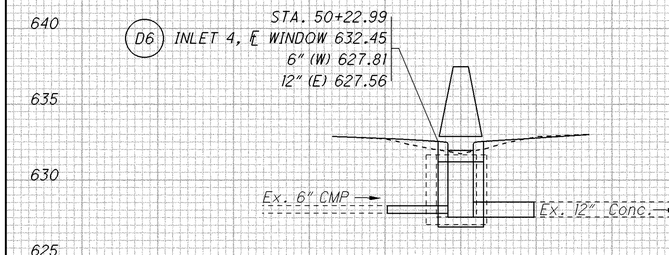
14
22

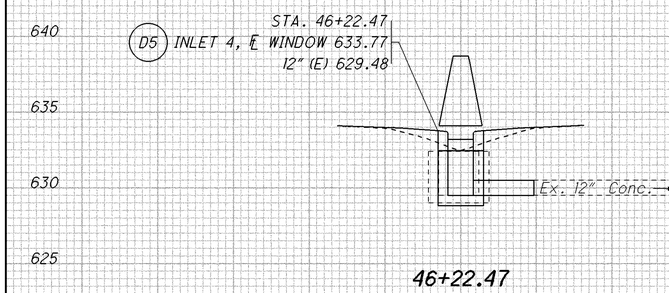


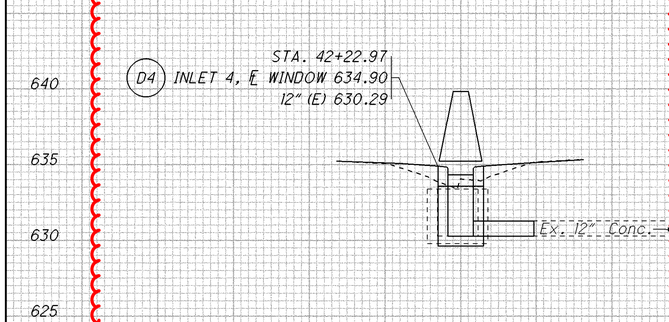












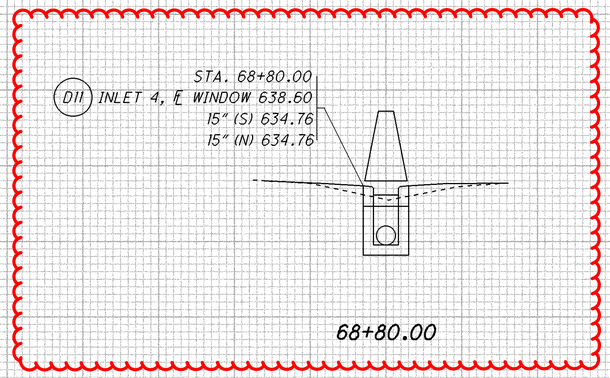
20 10 0 10 20

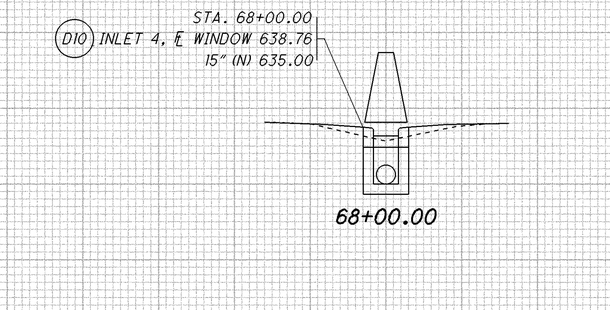
CALCULATED TKB
CHECKED MLC

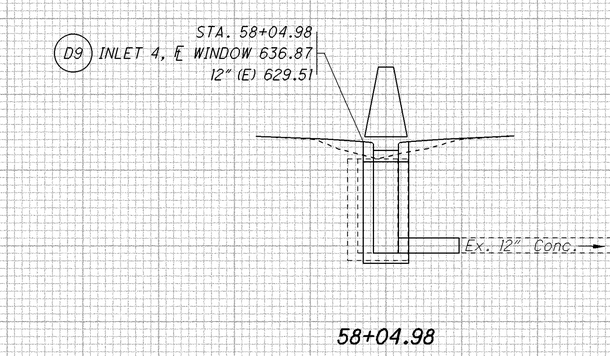
DRAINAGE DETAILS - U.S. 24
STA. 16+33.34 TO STA. 52+22.38

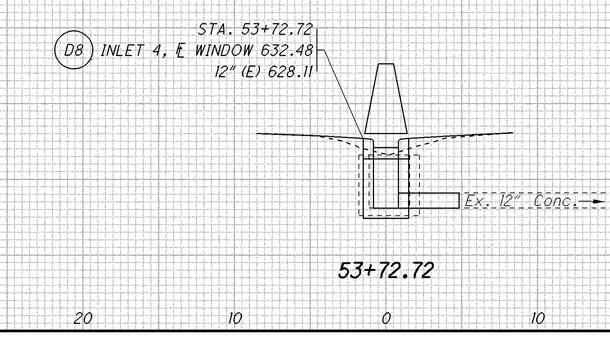
LUC-24-13.98

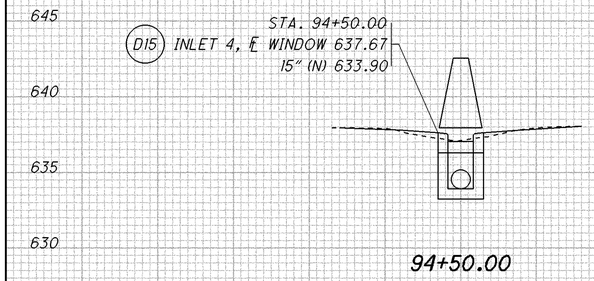
16
22

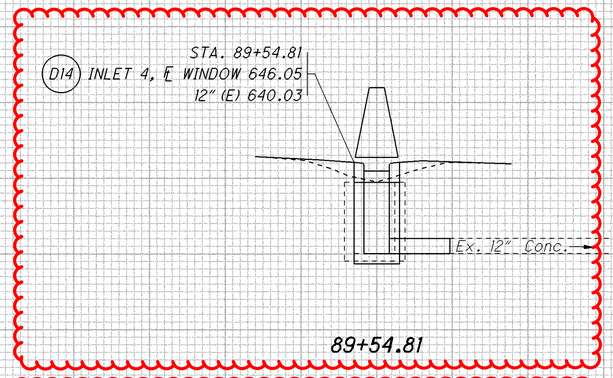


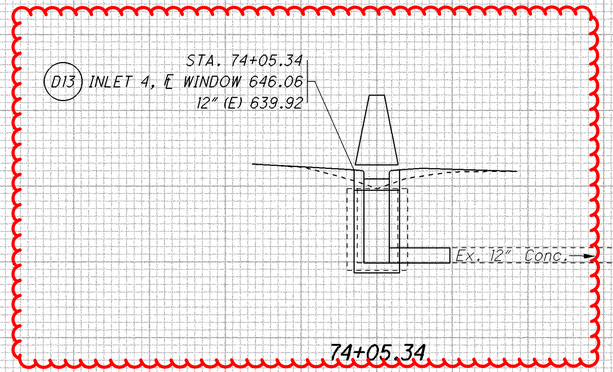


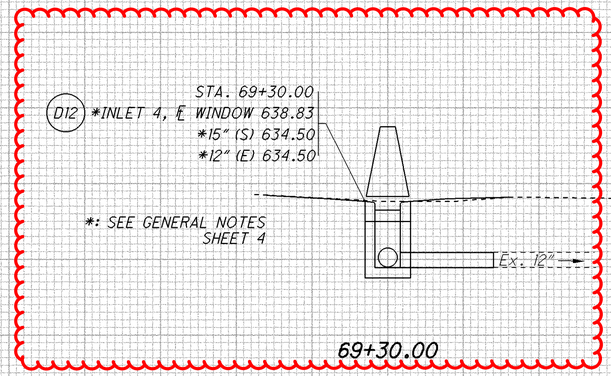








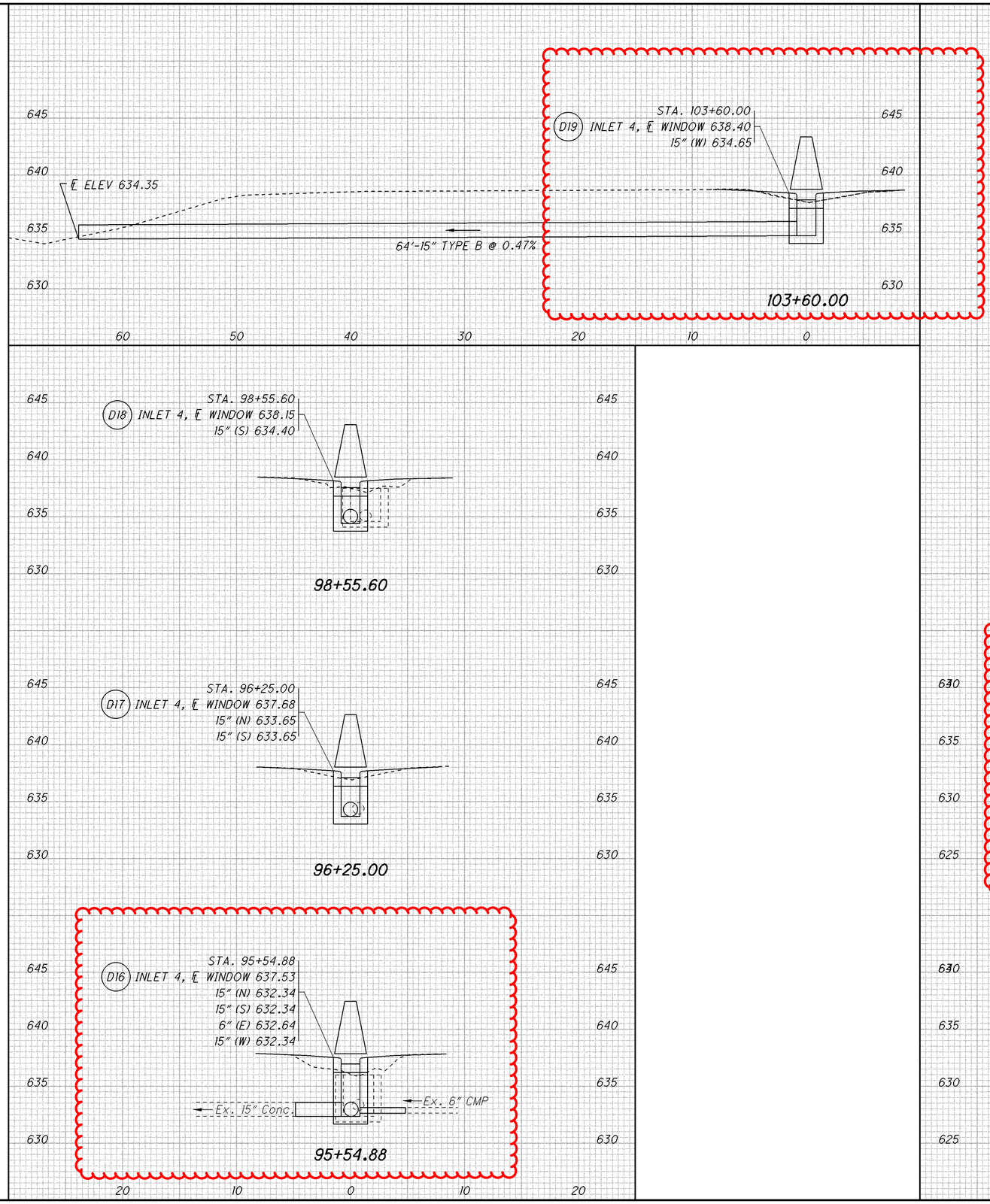




CALCULATED TKB
CHECKED MLC

DRAINAGE DETAILS - U.S. 24
STA. 53+72.72 TO STA. 94+50.00

LUC-24-13.98



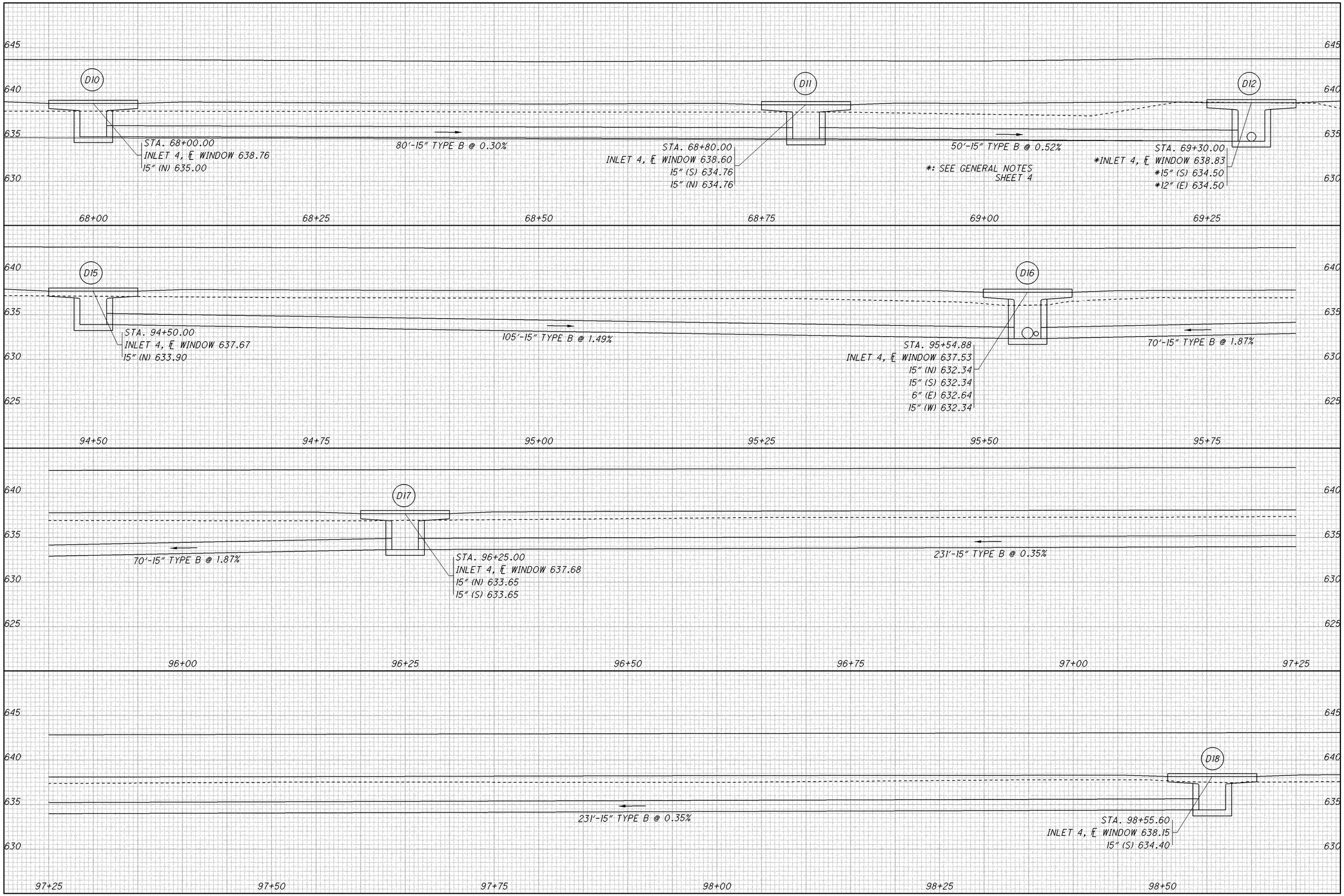
CALCULATED TKB
CHECKED MLC

DRAINAGE DETAILS - U.S. 24
STA. 95+54.88 TO STA. 111+05.56

LUC-24-13.98

18
22

STORM SEWER PROFILE - ℄ U.S. 24



CALCULATED TKB
CHECKED MLC

LUC-24-13.98

19
22

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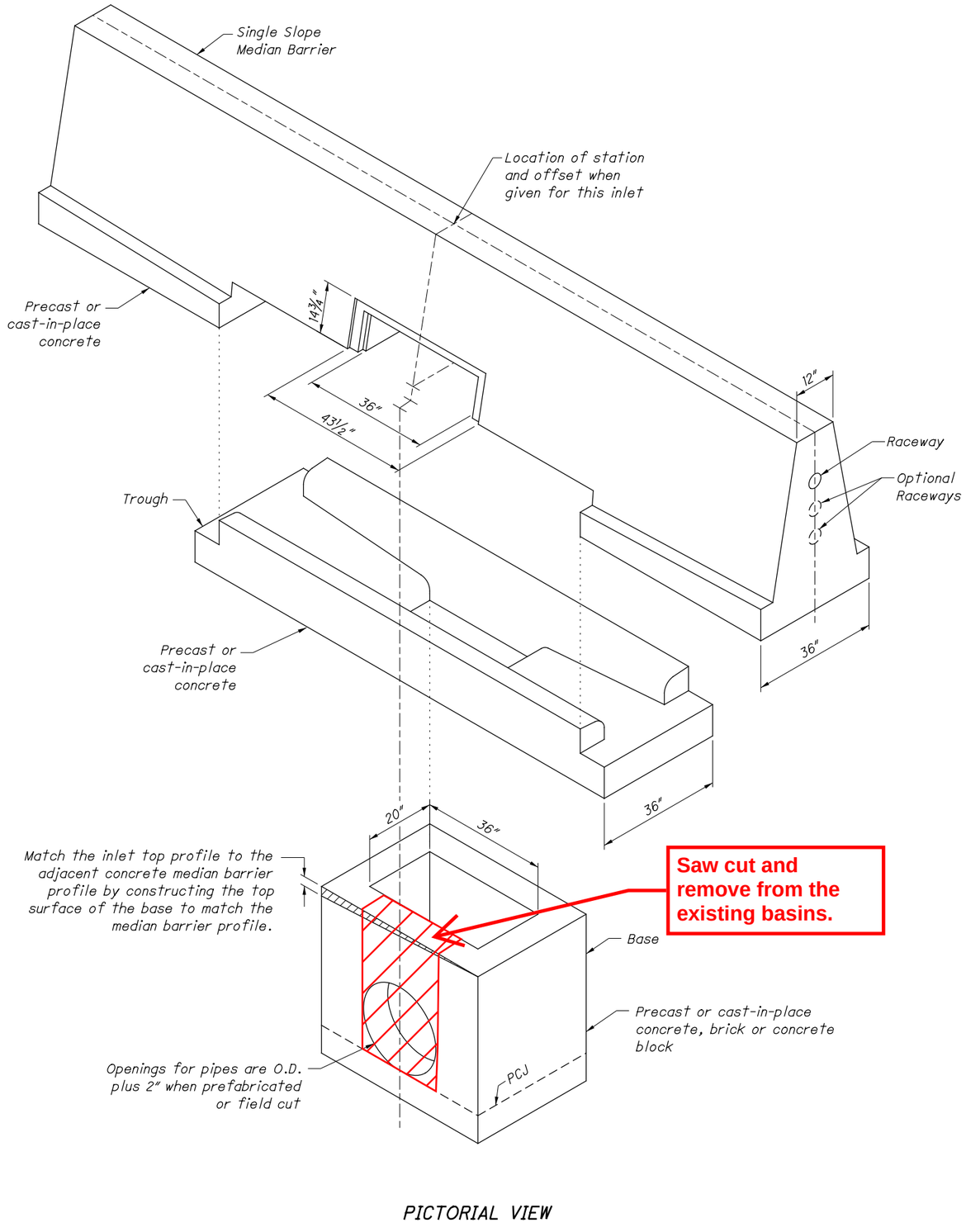


PICTORIAL VIEW

NOTES

GENERAL: *For details of Single Slope Concrete Barriers, see SCD RM-4.3.*

WALLS: *The walls between the bottom slab and the upper permissible construction joint may be built of brick, concrete block or cast-in-place concrete, 8" nominal thickness for depths of 12' or less. Precast walls have a minimum thickness of 6" and are reinforced sufficiently to permit shipping and handling without damage.*

CONCRETE: *Provide 4000 psi compressive strength concrete when cast-in-place. When precast, provide concrete that meets the requirements of CMS 706.13. Mark the Inlet number on the structure. Seal the exposed concrete surfaces of the barrier per Item 512 when specified in the plans.*

REINFORCING STEEL: *Provide epoxy coated reinforcing steel in accordance with CMS 509.09.*

FOOTING JOINTS: *Provide a sealed joint with the vertical walls between the barrier footing and a concrete pavement or concrete base as detailed on SCD RM-4.3.*

STEPS: *Provide steps in accordance with SCD MH-1.*

INLETS OVER 12 FEET IN DEPTH: *Precast or cast-in-place inlets over 12 feet in depth. Reinforce with #5 bars on 12" centers both vertically and horizontally, with 2" clearance from the inside wall face.*

OPENINGS: *Ensure pipe openings are the outside diameter of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per C&MS 611.*

ACCESS DOOR: *Provide galvanized steel for the door, frame and all inserts. Provide stainless steel hex head bolts.*

DEPRESSED APRON: *Slope the aprons on both sides of the inlet toward windows and fill with 4000 psi compressive strength concrete. On superelevated sections, slope the aprons as shown in Section C-C.*

PCJ: *Permissible construction joint.*

PAYMENT: *Payment will be made at the unit price bid per Each for Item 611 - Inlet, No. 4 for Single Slope Barrier, Type ____ (B or B1) and includes all materials, reinforcing steel, inlets, raceways, wiring, labor and incidentals required to construct the inlet, as shown. Sealing of exposed concrete and sealing of the barrier will be paid for under Item 512 when specified in the plans.*

LEGEND

1 *Provide a 1½" minimum exp. joint in concrete pavement or concrete shoulders.*

2 *4" electrical raceway, if required elsewhere in the plans. See RACEWAY PLACEMENT Details on Sheet 3.*

STANDARD INLET TYPES					
INLET NO. 3	H	A	B	C	D
Type B	42"	4"	28"	4⅜"	27¼"
Type B1	57"	1⅛"	33¾"	1½"	33"

STATE OF OHIO DEPARTMENT OF TRANSPORTATION HYDRAULIC ENGINEER
Jeffery E. Syar

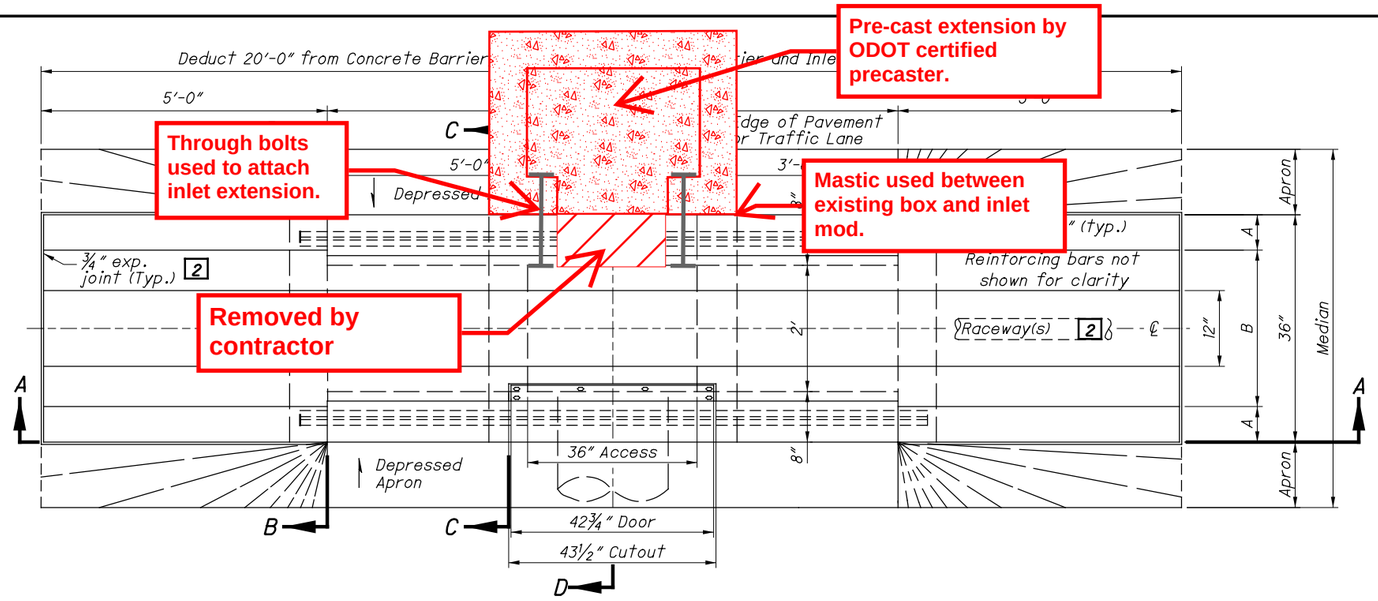
REVISIONS
10-21-11
7-20-12
1-18-13
1-17-14
1-15-16
7-16-21
7-15-22

ROADWAY HYDRAULIC ENGINEER
M. Cozzoli

OFFICE OF HYDRAULICS ENGINEERING

STANDARD HYDRAULIC CONSTRUCTION DRAWING
INLET No. 4 FOR SINGLE SLOPE BARRIER, TYPES B, B1

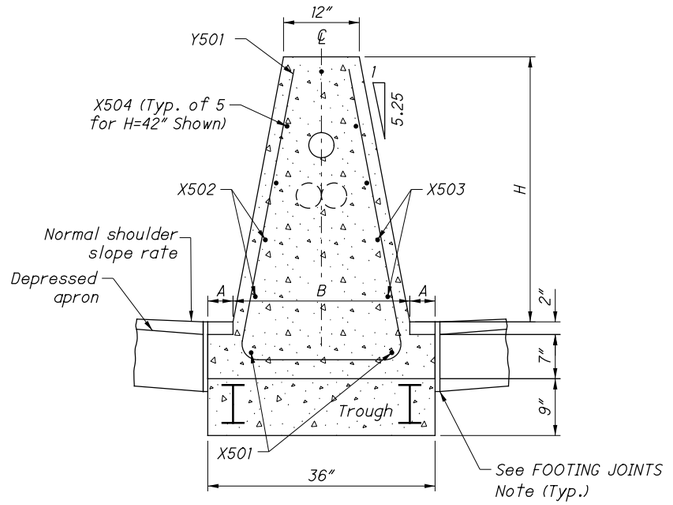
DRAWING
I-4B, 4B1



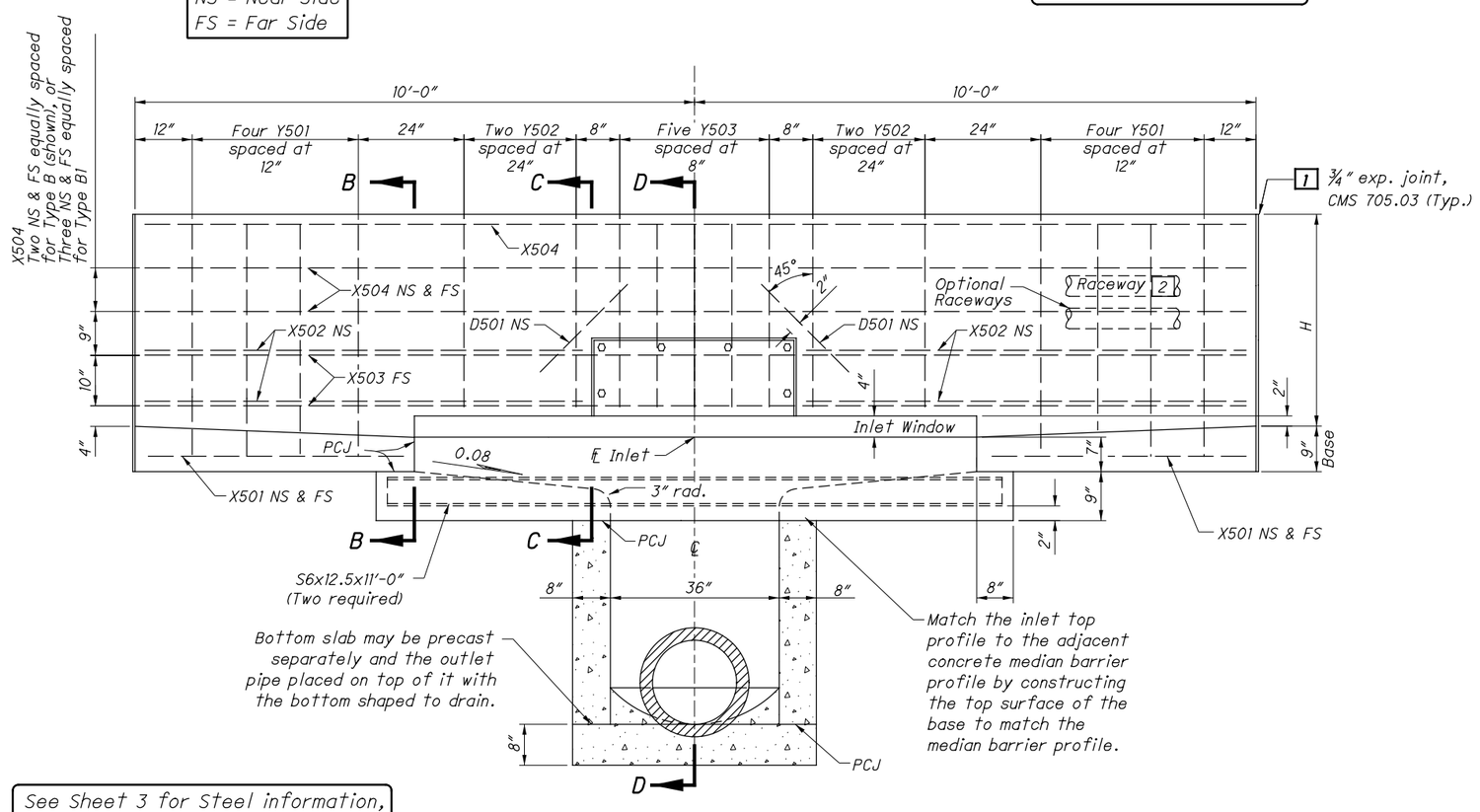
PLAN VIEW
NOT TO SCALE

For Dimensions H, A and B, see Standard Inlet Types on Sheet 1.

NS = Near Side
FS = Far Side

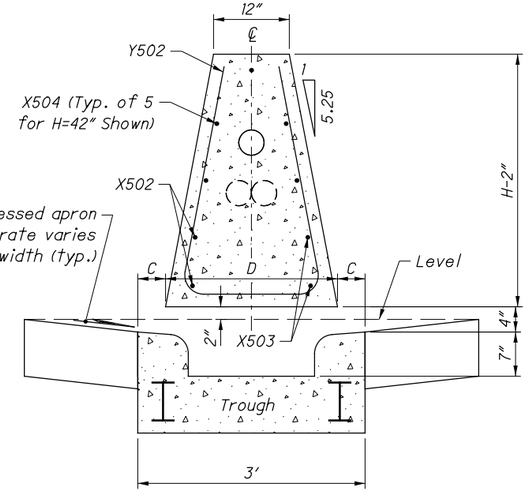


SECTION B-B



SECTION A-A
NOT TO SCALE

See Sheet 3 for Steel information, Bending Diagrams, and Access Door details.



SECTION C-C

STATE OF OHIO DEPARTMENT OF TRANSPORTATION HYDRAULIC ENGINEER
Jeffery E. Syar

REVISIONS
10-21-11
7-20-12
1-18-13
1-17-14
1-15-16
7-16-21
7-15-22

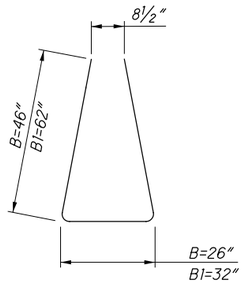
ROADWAY HYDRAULIC ENGINEER
M. Cozzoli

OFFICE OF HYDRAULICS ENGINEERING

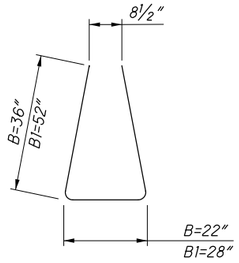
STANDARD HYDRAULIC CONSTRUCTION DRAWING

INLET No. 4 FOR SINGLE SLOPE BARRIER, TYPES B, B1

SCD NUMBER
I-4B, 4B1



Y501



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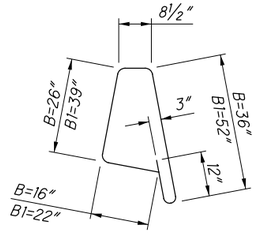
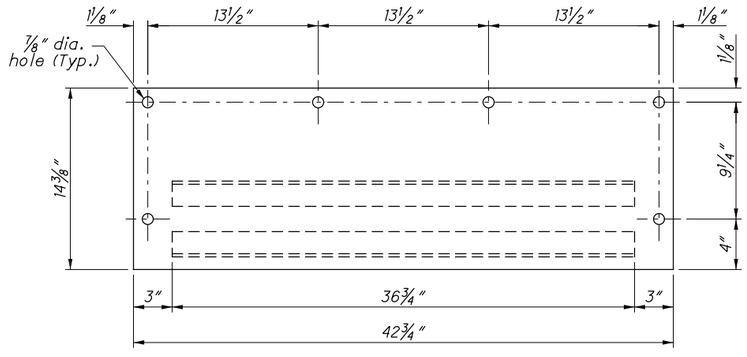


Y503

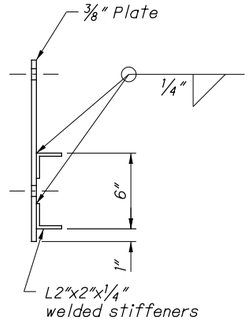
BENDING DIAGRAMS

STEEL LIST (For Estimating Purposes Only)

INLET NO. 4	X501 #5 bar Straight		X502 #5 bar Straight		X503 #5 bar Straight		X504 #5 bar Straight		Y501 #5 bar Bent		Y502 #5 bar Bent		Y503 #5 bar Bent		D501 #5 bar Straight		S6x12.5	
	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
Type B	4	4'-8"	4	7'-10"	2	19'-8"	5	19'-8"	8	9'-9"	4	7'-9"	5	7'-6"	2	2'-0"	2	11'-0"
Type B1	4	4'-8"	4	7'-10"	2	19'-8"	7	19'-8"	8	12'-9"	4	10'-9"	5	10'-5"	2	2'-0"	2	11'-0"

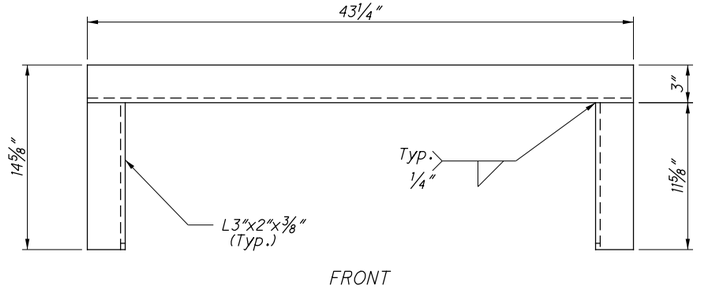


FRONT

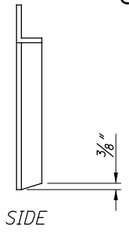


SIDE

ACCESS DOOR DETAILS



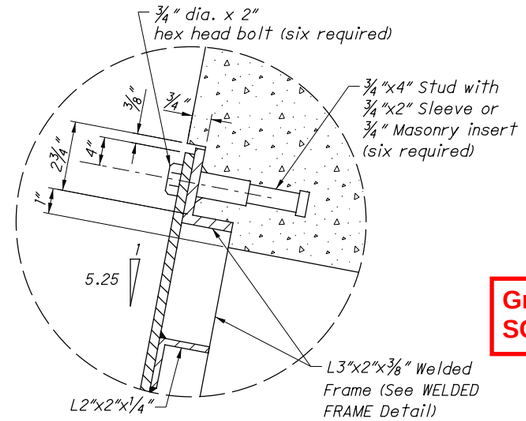
FRONT



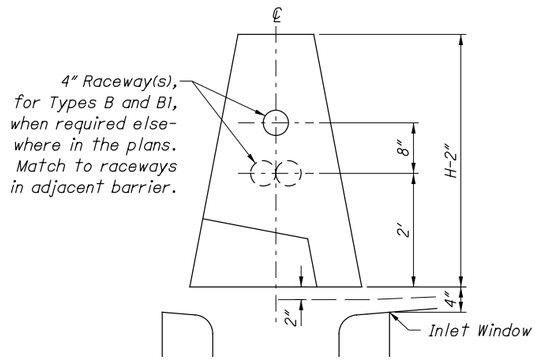
SIDE

WELDED FRAME DETAIL

See Sheet 1 for NOTES and LEGEND. See Sheet 2 for Plan, Elevation, and Section Views.

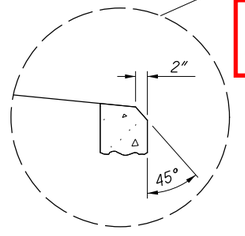


DETAIL A



RACEWAY PLACEMENT

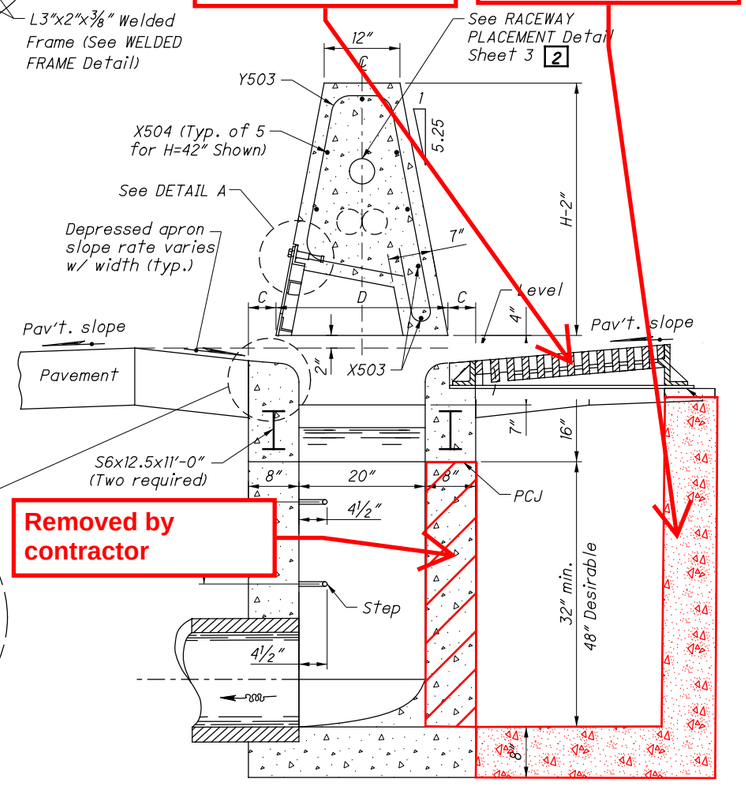
(Over Access Cutout)



ALTERNATE SPILLWAY DETAIL

Grate specified by SCD I-3B

Pre-Cast Inlet Extension



SECTION D-D

See Sheet 2

STATE OF OHIO DEPARTMENT OF TRANSPORTATION HYDRAULIC ENGINEER
Jeffery E. Syar

REVISIONS
10-21-11
7-20-12
1-18-13
1-17-14
1-15-16
7-16-21
7-15-22

ROADWAY HYDRAULIC ENGINEER
M. Cozzoli

OFFICE OF HYDRAULICS ENGINEERING

STANDARD HYDRAULIC CONSTRUCTION DRAWING

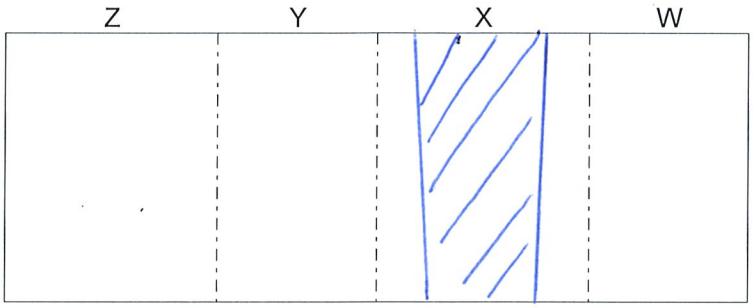
INLET No. 4 FOR SINGLE SLOPE BARRIER, TYPES B, B1

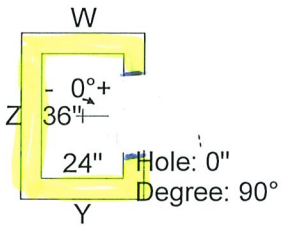
DRAWING
I-4B, 4B1

Job Name: ODOT 256(22) PART 2 CT22624 CT22624	Yard Location:
Contractor: KOKOSING	Job Pieces:
Structure ID: **D4 RETRO**	Engineer: CM

Structure Notes: X WALL TO BE OPEN

Default CB - Exterior Dimensions - Bottom of Hole - Clockwise

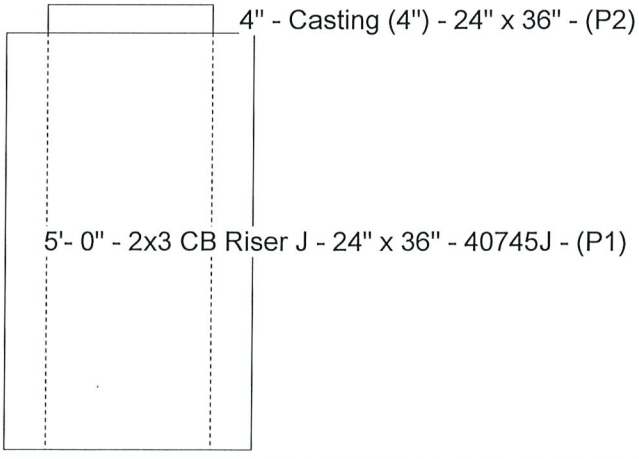




(P1) - 5'- 0" - 2x3 CB Riser J - 24" x 36" - 40745J

Position	ID	Elev	Angle	Up (_)	Ext. (cw)	Wall	Connector	Hole	Pipe	Ref
Rim		634.9'								
Reducer										
Invert 1	A	630.29'	90°	8.75"	24"	0"	NO HOLE	0"	0.5" NO PIPE	P1
Invert 2										
Invert 3										
Invert 4										
Invert 5										
Invert 6										
Invert 7										
Invert 8										

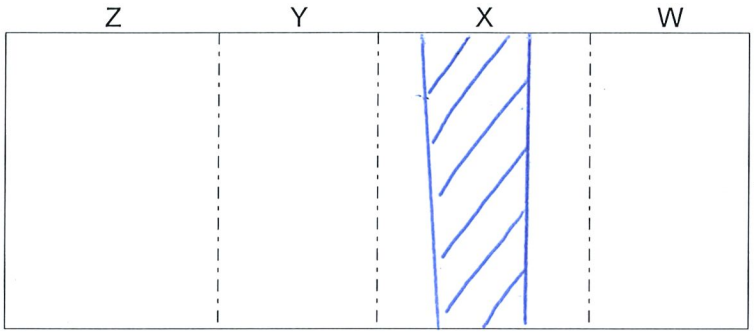
1) 4" - Casting (4") - 24" x 36"
1) 5'- 0" - 2x3 CB Riser J - 24" x 36" - 40745J
1) NO HOLE

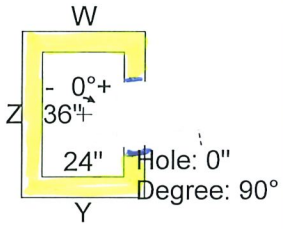


Job Name: ODOT 256(22) PART 2 CT22624 CT22624	Yard Location:
Contractor: KOKOSING	Job Pieces:
Structure ID: **D7 RETRO**	Engineer: CM

Structure Notes: X WALL TO BE OPEN

Default CB - Exterior Dimensions - Bottom of Hole - Clockwise

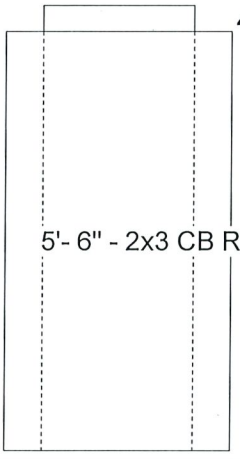




(P1) - 5'- 6" - 2x3 CB Riser J - 24" x 36" - 40747J

Position	ID	Elev	Angle	Up (_)	Ext. (cw)	Wall	Connector	Hole	Pipe	Ref
Rim		632.16'								
Reducer										
Invert 1	A	627'	90°	8.25"	24"	0"	NO HOLE	0"	0.5" NO PIPE	P1
Invert 2										
Invert 3										
Invert 4										
Invert 5										
Invert 6										
Invert 7										
Invert 8										

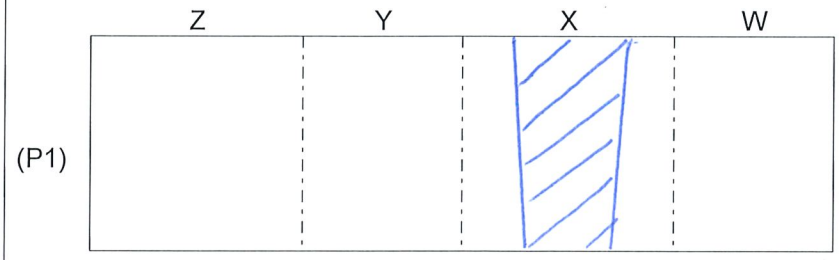
1) 4" - Casting (4") - 24" x 36"
1) 5'- 6" - 2x3 CB Riser J - 24" x 36" - 40747J
1) NO HOLE

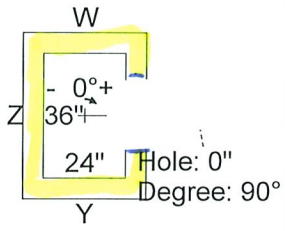


Job Name: ODOT 256(22) PART 2 CT22624 CT22624	Yard Location:
Contractor: KOKOSING	Job Pieces:
Structure ID: **D11 RETRO**	Engineer: CM

Structure Notes: X WALL TO BE OPEN

Default CB - Exterior Dimensions - Bottom of Hole - Clockwise

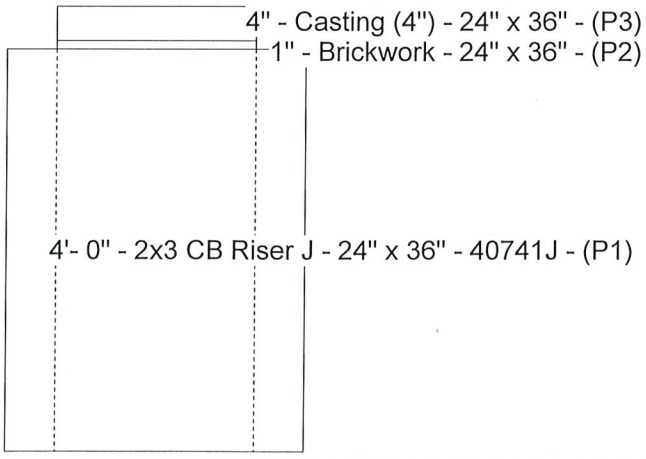




(P1) - 4'- 0" - 2x3 CB Riser J - 24" x 36" - 40741J

Position	ID	Elev	Angle	Up (_)	Ext. (cw)	Wall	Connector	Hole	Pipe	Ref
Rim		638.6'								
Reducer										
Invert 1	A	634.76'	90°	7.25"	24"	0"	NO HOLE	0"	0.5" NO PIPE	P1
Invert 2										
Invert 3										
Invert 4										
Invert 5										
Invert 6										
Invert 7										
Invert 8										

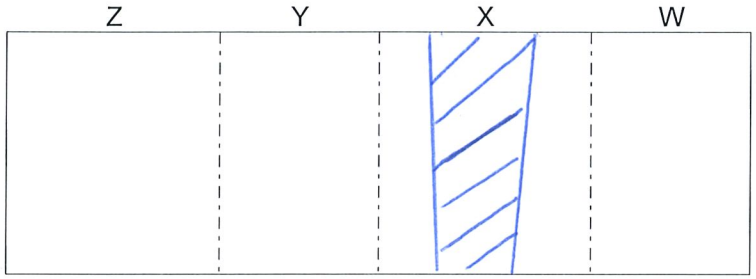
1) 4" - Casting (4") - 24" x 36"
1) 1" - Brickwork - 24" x 36"
1) 4'- 0" - 2x3 CB Riser J - 24" x 36" - 40741J
1) NO HOLE

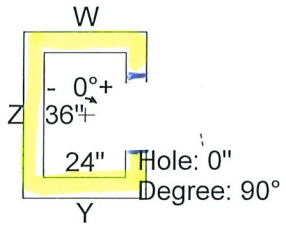


Job Name: ODOT 256(22) PART 2 CT22624 CT22624	Yard Location:
Contractor: KOKOSING	Job Pieces:
Structure ID: **D12 RETRO**	Engineer: CM

Structure Notes: X WALL TO BE OPEN

Default CB - Exterior Dimensions - Bottom of Hole - Clockwise

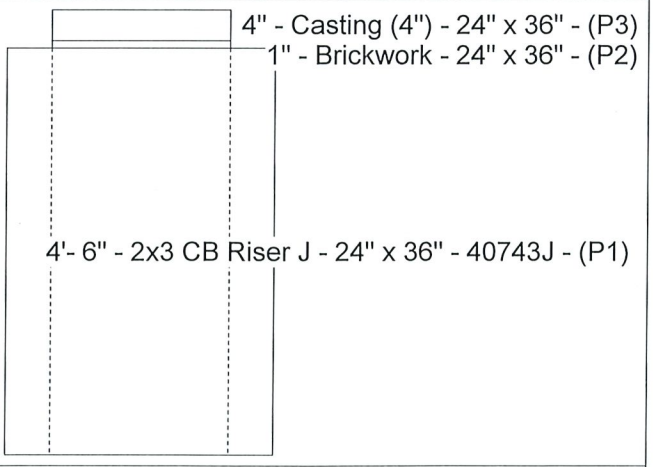




(P1) - 4'- 6" - 2x3 CB Riser J - 24" x 36" - 40743J

Position	ID	Elev	Angle	Up (_)	Ext. (cw)	Wall	Connector	Hole	Pipe	Ref
Rim		638.83'								
Reducer										
Invert 1	A	634.5'	90°	8"	24"	0"	NO HOLE	0"	0.5" NO PIPE	P1
Invert 2										
Invert 3										
Invert 4										
Invert 5										
Invert 6										
Invert 7										
Invert 8										

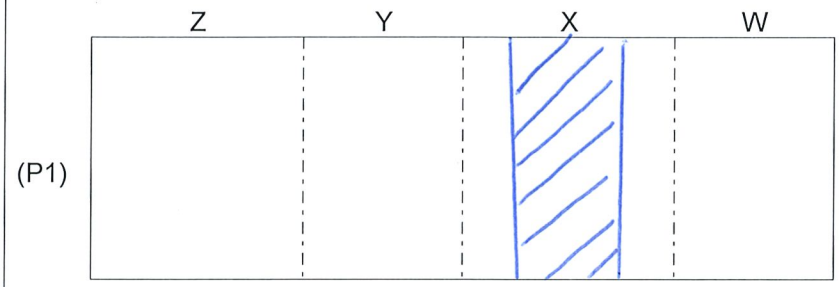
1) 4" - Casting (4") - 24" x 36"
1) 1" - Brickwork - 24" x 36"
1) 4'- 6" - 2x3 CB Riser J - 24" x 36" - 40743J
1) NO HOLE

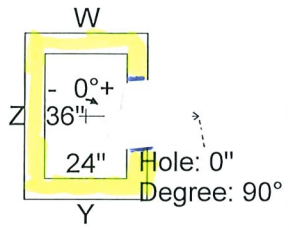


Job Name: ODOT 256(22) PART 2 CT22624 CT22624	Yard Location:
Contractor: KOKOSING	Job Pieces:
Structure ID: **D13 RETRO**	Engineer: CM

Structure Notes: X WALL TO BE OPEN

Default CB - Exterior Dimensions - Bottom of Hole - Clockwise

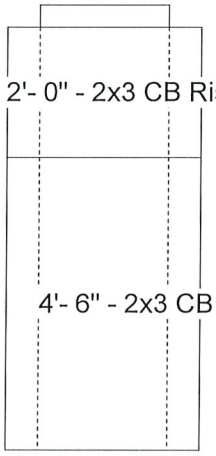




(P1) - 4'- 6" - 2x3 CB Riser J - 24" x 36" - 40743J

Position	ID	Elev	Angle	Up (_)	Ext. (cw)	Wall	Connector	Hole	Pipe	Ref
Rim		646.06'								
Reducer										
Invert 1	A	639.92'	90°	8.5"	24"	0"	NO HOLE	0"	0.5" NO PIPE	P1
Invert 2										
Invert 3										
Invert 4										
Invert 5										
Invert 6										
Invert 7										
Invert 8										

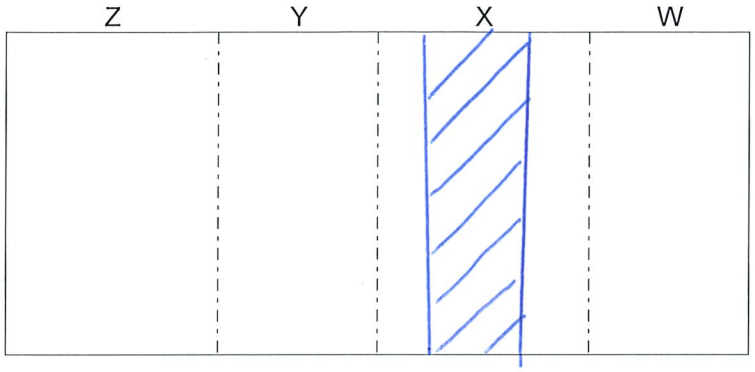
1) 4" - Casting (4") - 24" x 36"
1) 2'- 0" - 2x3 CB Riser Stock - 24" x 36" - 40721
1) 4'- 6" - 2x3 CB Riser J - 24" x 36" - 40743J
1) NO HOLE

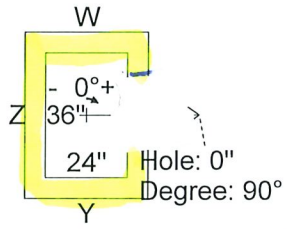


Job Name: ODOT 256(22) PART 2 CT22624 CT22624	Yard Location:
Contractor: KOKOSING	Job Pieces:
Structure ID: **D14 RETRO**	Engineer: CM

Structure Notes: X WALL TO BE OPEN

Default CB - Exterior Dimensions - Bottom of Hole - Clockwise

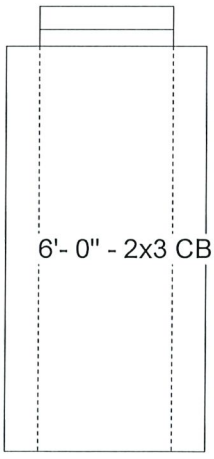




(P1) - 6'- 0" - 2x3 CB Riser J - 24" x 36" - 40761J

Position	ID	Elev	Angle	Up (_)	Ext. (cw)	Wall	Connector	Hole	Pipe	Ref
Rim		646.05'								
Reducer										
Invert 1	A	640.03'	90°	7.25"	24"	0"	NO HOLE	0"	0.5" NO PIPE	P1
Invert 2										
Invert 3										
Invert 4										
Invert 5										
Invert 6										
Invert 7										
Invert 8										

1) 4" - Casting (4") - 24" x 36"
1) 3" - Brickwork - 24" x 36"
1) 6'- 0" - 2x3 CB Riser J - 24" x 36" - 40761J
1) NO HOLE



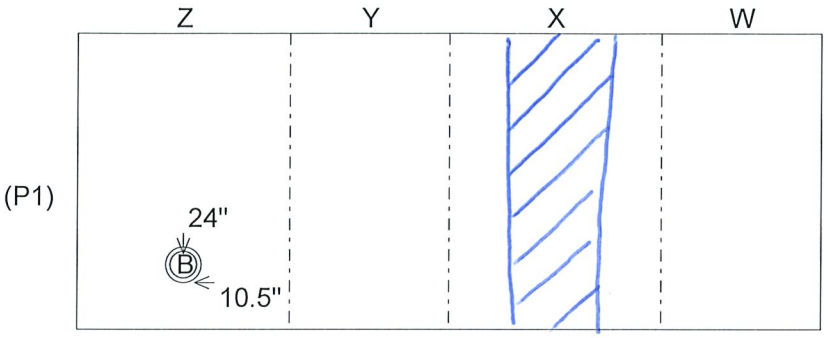
4" - Casting (4") - 24" x 36" - (P3)
3" - Brickwork - 24" x 36" - (P2)

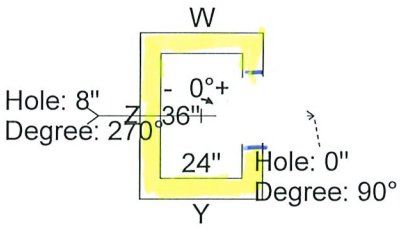
6'- 0" - 2x3 CB Riser J - 24" x 36" - 40761J - (P1)

Job Name: ODOT 256(22) PART 2 CT22624 CT22624	Yard Location:
Contractor: KOKOSING	Job Pieces:
Structure ID: **D16 RETRO**	Engineer: CM

Structure Notes: X WALL TO BE OPEN

Default CB - Exterior Dimensions - Bottom of Hole - Clockwise

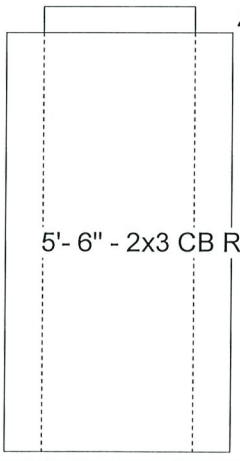




(P1) - 5'- 6" - 2x3 CB Riser J - 24" x 36" - 40747J

Position	ID	Elev	Angle	Up (_)	Ext. (cw)	Wall	Connector	Hole	Pipe	Ref
Rim		637.53'								
Reducer										
Invert 1	A	632.34'	90°	7.75"	24"	0"	NO HOLE	0"	0.5" NO PIPE	P1
Invert 2	B	632.64'	270°	10.5"	24"	0.25"	Hole 8"	8"	6" CMP	P1
Invert 3										
Invert 4										
Invert 5										
Invert 6										
Invert 7										
Invert 8										

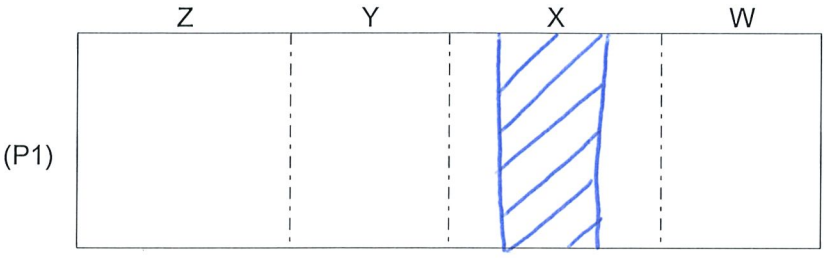
1) 4" - Casting (4") - 24" x 36"
1) 5'- 6" - 2x3 CB Riser J - 24" x 36" - 40747J
1) NO HOLE
1) Hole 8"

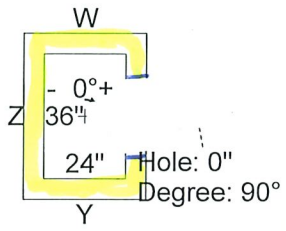


Job Name: ODOT 256(22) PART 2 CT22624 CT22624	Yard Location:
Contractor: KOKOSING	Job Pieces:
Structure ID: **D19 RETRO**	Engineer: CM

Structure Notes: X WALL TO BE OPEN

Default CB - Exterior Dimensions - Bottom of Hole - Clockwise

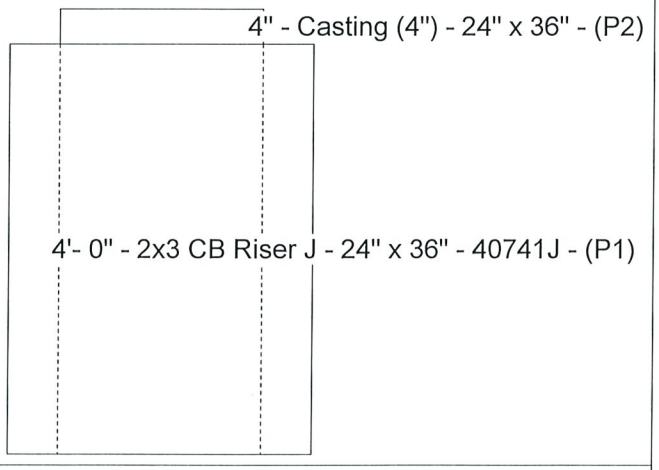




(P1) - 4'- 0" - 2x3 CB Riser J - 24" x 36" - 40741J

Position	ID	Elev	Angle	Up (_)	Ext. (cw)	Wall	Connector	Hole	Pipe	Ref
Rim		638.4'								
Reducer										
Invert 1	A	634.65'	90°	7.25"	24"	0"	NO HOLE	0"	0.5" NO PIPE	P1
Invert 2										
Invert 3										
Invert 4										
Invert 5										
Invert 6										
Invert 7										
Invert 8										

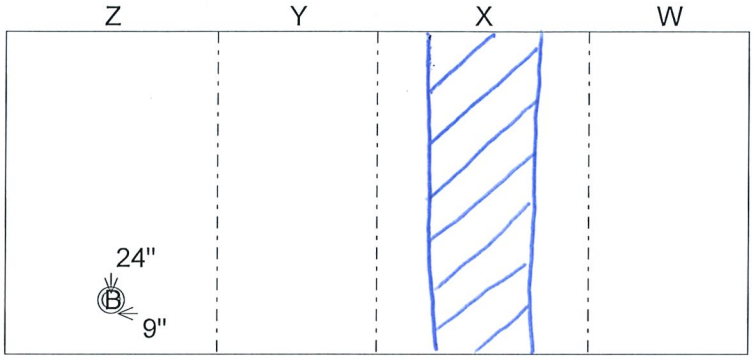
1) 4" - Casting (4") - 24" x 36"
1) 4'- 0" - 2x3 CB Riser J - 24" x 36" - 40741J
1) NO HOLE

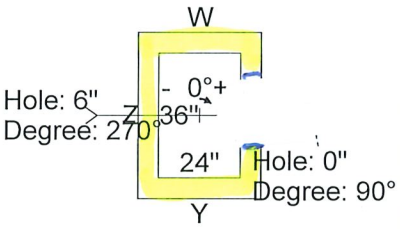


Job Name: ODOT 256(22) PART 2 CT22624 CT22624	Yard Location:
Contractor: KOKOSING	Job Pieces:
Structure ID: **D21 RETRO**	Engineer: CM

Structure Notes: X WALL TO BE OPEN

Default CB - Exterior Dimensions - Bottom of Hole - Clockwise

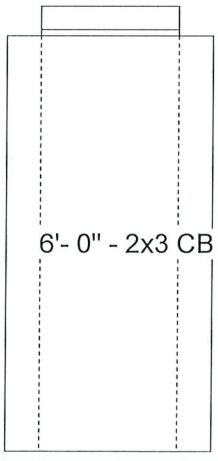




(P1) - 6'- 0" - 2x3 CB Riser J - 24" x 36" - 40761J

Position	ID	Elev	Angle	Up (_)	Ext. (cw)	Wall	Connector	Hole	Pipe	Ref
Rim		635.05'								
Reducer										
Invert 1	A	629.1'	90°	6"	24"	0"	NO HOLE	0"	0.5" NO PIPE	P1
Invert 2	B	629.44'	270°	9"	24"	0.39"	Hole 6"	6"	4" ADS N-12	P1
Invert 3										
Invert 4										
Invert 5										
Invert 6										
Invert 7										
Invert 8										

1) 4" - Casting (4") - 24" x 36"
1) 1" - Brickwork - 24" x 36"
1) 6'- 0" - 2x3 CB Riser J - 24" x 36" - 40761J
1) NO HOLE
1) Hole 6"



4" - Casting (4") - 24" x 36" - (P3)
1" - Brickwork - 24" x 36" - (P2)

6'- 0" - 2x3 CB Riser J - 24" x 36" - 40761J - (P1)