

**UTILITIES LEGEND**

- PROPOSED WATERLINE OR SEWERLINE
- - - - EXISTING WATERLINE OR SEWERLINE
- EXISTING MANHOLE
- PROPOSED MANHOLE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING GATE VALVE
- PROPOSED GATE VALVE
- EXISTING GATE VALVE
- PROPOSED GATE VALVE
- REDUCER
- BLOW OFF ASSEMBLY WITH GATE VALVE
- PER COUNTY STANDARDS
- SANITARY SEWER SERVICE
- WATER SERVICE

**PROPERTY INFORMATION**  
 PIN NO. : 9774-43-1655.000  
 PARCEL NO. : 18898  
 ZONING: CUP RA-40  
 FLOOD MAP NUMBER: 3710977400U

AREA	ACREAGE	TOTAL
AREA A	9.06 AC	21.87 AC
AREA B	12.81 AC	35.11 AC
OPEN SPACE:	2.97 AC	2.74 AC
RIGHT OF WAY:	0.82 AC	2.74 AC
BUILDING LOT (TYP. SINGLE OWNERSHIP SINGLE FAMILY HOME)	5.30 AC	14.43 AC

**GENERAL NOTES**

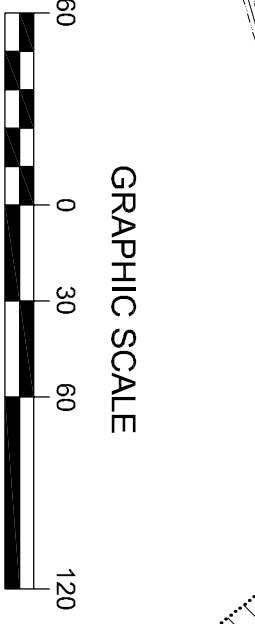
1. SURVEY INFORMATION FROM VAN NUCH (LAND SURVEYS, FERRINGTON, RALEIGH, NC) AND SKETCH PLAN BY SEARS DESIGN GROUP.
2. ALL WATER MAINS SHALL BE OWNED AND OPERATED BY CHATHAM COUNTY PUBLIC UTILITIES DEPARTMENT IN ACCORDANCE WITH CHATHAM COUNTY PUBLIC UTILITIES STANDARDS AND SPECIFICATIONS.
3. SANITARY SEWER SHALL BE OWNED AND OPERATED BY FICH CREATIONS, INC.
4. MAINTENANCE OF BURKE PLACE & MILLCREEK CIRCLE WILL BE THE RESPONSIBILITY OF FICH CREATIONS, INC. UNTIL CONVEYED TO THE HOMEOWNERS ASSOCIATION OR TO N.C.D.O.T.
5. ESSENTIAL FOR THE CHATHAM COUNTY WATER SYSTEM CHATHAM COUNTY WILL NOT BE RESPONSIBLE FOR RESTORING PRIVATE INFRASTRUCTURE (WASTEWATER SYSTEM COMPONENTS, STREETS, DRIVEWAYS, DRIVEWAYS, ETC.) IN THE COURSE OF RESTORING THE PUBLIC WATER SYSTEM.

**PROTECTION ZONES FOR OPEN SPACE, BUFFERS AND UTILITY EASEMENTS - FROM SKETCH PLAN BY SEARS DESIGN GROUP, RALEIGH, NC**

1. **TYPE 1 - Retention Open Space and Buffer Easement:** This zone is for retaining open space and buffer easements for storm water control devices. Utilities can be placed in this area, as long as they do not interfere with the storm water control devices. Invasive species of vegetation can be removed as can grass less than 6" tall.
2. **TYPE 2 - Open Space Buffer and Utility Easement:** This zone is placed onto the property lot and is owned by the Property Owner. It is a no tree cut zone and a no build zone. Utilities can be placed through this on the property side lines. Individual lot storm water devices will be placed in these areas. Invasive species of vegetation can be removed from this zone.
3. **TYPE 3 - Existing Off-Site Water Hazard Subsoil/Vegetative Stream Buffer, Open Space:** This is an existing no cut, no build zone of 50' width per 1994 Chatham County Subsoil and Watershed Protection Ordinance, Section 304. This is on the existing Fearrington Village subdivision, not in this section.
4. **Vegetative Streamway Buffer:** 100' wide from top of stream bank, Riparian Buffer. This is a no cut, no build zone. Invasive species of vegetation can be removed by hand only. No utilities nor storm water devices can be placed in this zone.
5. **Open Space Buffer and Landscape Easement:** This zone is for establishing long term buffering between dwellings. It will preserve existing vegetation where possible while allowing grading, individual storm water devices, and placement of individual evergreen and ornamental plantings and is a no build zone.
6. **Utility and Storm Water Buffer:** This zone is for utilities and storm water devices and is to be owned by the HOA.

**NOTES:**

1. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. ALL WORK ON MILLCROFT RIGHT OF WAY SHALL BE IN COMPLIANCE WITH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) STANDARDS AND SPECIFICATIONS FOR ROADWAY DESIGN AND CONSTRUCTION. CONTRACTOR SHALL MAINTAIN A COPY ON SITE DURING CONSTRUCTION.
3. ALL APPLICABLE CHATHAM COUNTY REGIONAL ORDINANCES SHALL BE FOLLOWED. THIS PROJECT WILL EMPLOY LOW IMPACT DEVELOPMENT METHODS. SEE SHEET 2.
4. NORTH CHATHAM COUNTY (WATER REGION CONTROL) MUST WORK ON P/W/ OF FICH CREATIONS, INC. (SEWER) PRIOR TO WORK ON THEIR RESPECTIVE SYSTEMS.
5. VERIFY FINAL LOT LINE LOCATION AND SANITARY SEWER SERVICE LOCATION WITH FICH CREATIONS PRIOR TO SERVICE INSTALLATION.

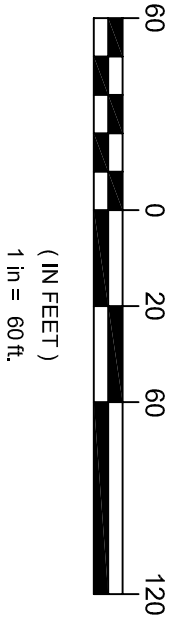


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**NOTES:**

1. CONSTRUCTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. SURVEY INFORMATION FROM N.W. FENCH LAND SURVEYS, PITTSBORO, NC. PROJECT LAYOUT AND SECTION PLANS BY SURVEY DESIGN GROUP, FALCON, NC.
3. ALL UTILITY LINES SHALL BE OWNED AND OPERATED BY CHATHAM COUNTY PUBLIC UTILITIES. ALL UTILITY LINES SHALL BE MAINTAINED BY CHATHAM COUNTY PUBLIC UTILITIES STANDARDS AND SPECIFICATIONS.
4. SWAMPY SEWER SHALL BE OWNED AND OPERATED BY FITCH CREATIONS, INC.
5. ALL WORK ON MILLCROFT RIGHT OF WAY SHALL BE IN COMPLIANCE WITH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) STANDARDS AND SPECIFICATIONS. ALL WORK SHALL BE IN COMPLIANCE WITH ALL TERMS AND CONDITIONS OF SWAMPY SEWER AND CONSTRUCTION. CONTRACTOR SHALL MAINTAIN A COPY ON SITE DURING CONSTRUCTION.
6. STREETS SHALL BE MAINTAINED BY FITCH CREATIONS, INC. UNTIL SUCH TIME AS THEY ARE PASSED OVER BY BOARD OF TRANSPORTATION ASSOCIATION FOR MAINTENANCE.
7. ALL APPLICABLE CHATHAM COUNTY EROSION CONTROL ORDINANCES SHALL BE FOLLOWED. THIS PROJECT WILL EMPLOY LOW IMPACT DEVELOPMENT METHODS. SEE SHEET 2.
8. NOTIFY CHATHAM COUNTY (WATER EROSION CONTROL, NCDOT WORK ON R/W, OR FITCH CREATIONS, INC. (SEWER) PRIOR TO WORK ON THEIR RESPECTIVE SYSTEMS.
9. VERIFY FINAL LOT LINE LOCATION AND SWAMPY SEWER SERVICE LOCATION WITH FITCH CREATIONS PRIOR TO SERVICE INSTALLATION.

**GRAPHIC SCALE**



INLET DATA		PIPE DATA				
INLET NO.	TYPE	STATION	DRAINAGE AREA (AC)	Q <sub>10</sub> INTO (CFS)	INVERT IN	INVERT OUT
A	C.I.	BURKE PLACE 0+460 (1317)	0.62	2.4	377.22	377.35
B	C.I.	BURKE PLACE 0+460 (1317)	0.19	0.9	377.12	377.12
C	C.I.	BURKE PLACE 0+460 (1317)	0.19	0.9	377.12	377.12
E	V.I.	BURKE PLACE 5+425.52 (225.87)	1.26	4.3	—	380.50
F	C.I.	BURKE PLACE 5+425.52 (1317)	0.10	0.5	P-4 382.12	382.26
G	C.I.	BURKE PLACE 5+425.52 (1317)	0.19	1.0	380.00	379.90
H	C.I.	BURKE PLACE 6+422.24 (235)	0.87	3.3	379.34	379.24

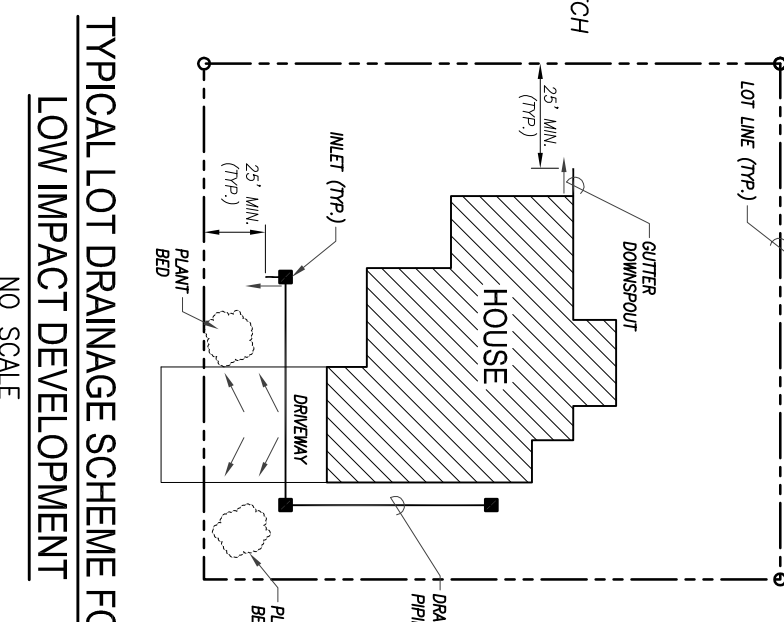
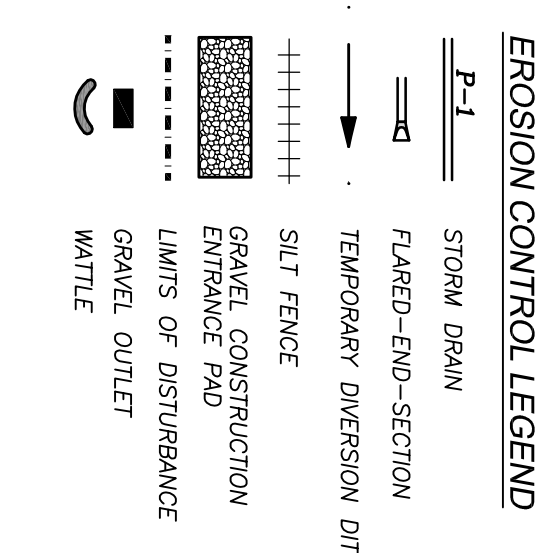
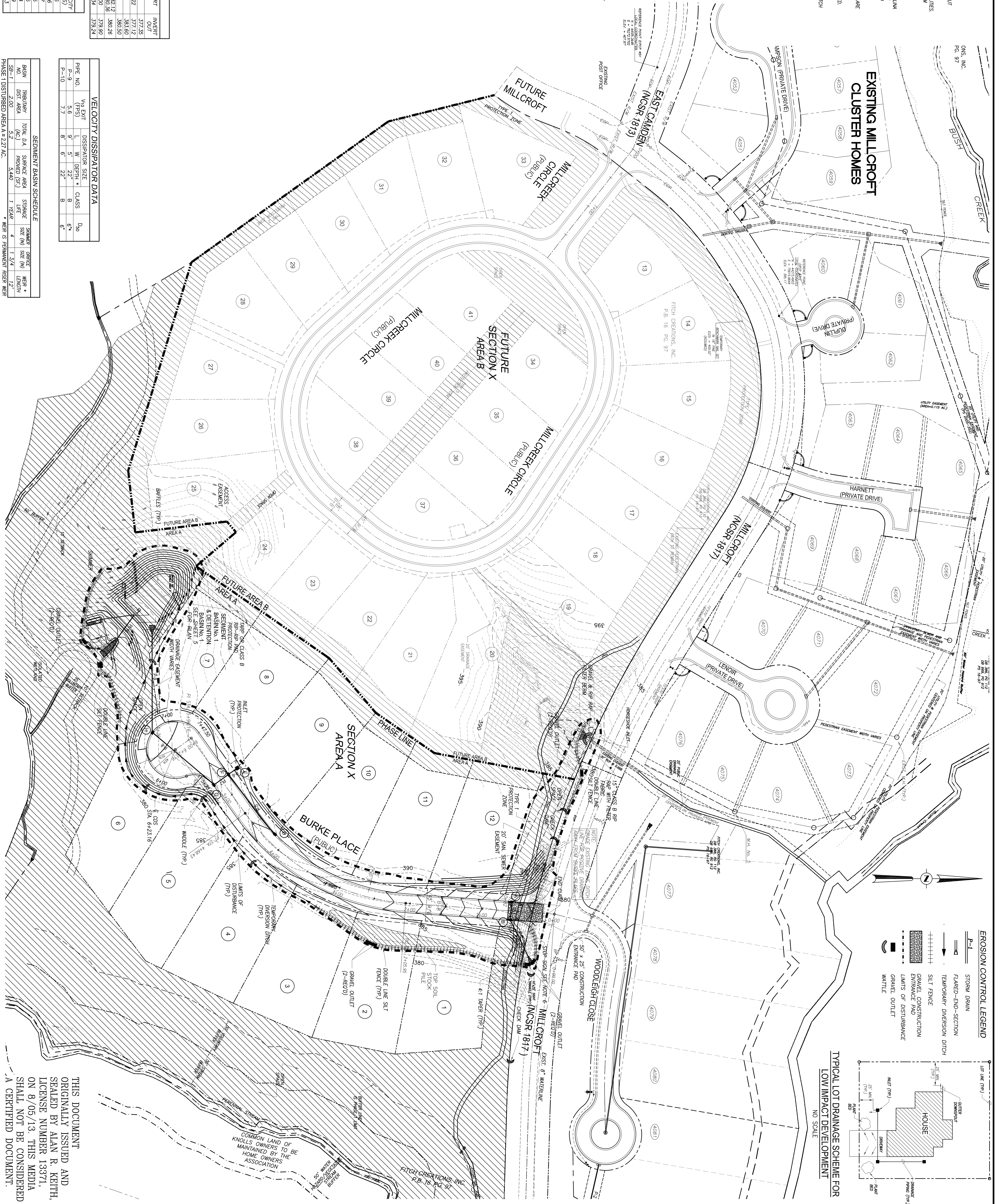
PIPE NO.	FROM	TO	Q <sub>10</sub> FROM (CFS)	Q <sub>10</sub> TOTAL IN PIPE (CFS)	MAT'L DIA. (IN)	LENGTH (FEET)	SLOPE (%)	CAPACITY (CFS)
P-1	A	B	2.4	2.4	15" RCP	28.00	0.50	4.6
P-2	B	C	0.9	3.3	15" RCP	56.00	1.64	17.6
P-3	D	F	0.8	0.8	15" RCP	104.51	1.42	7.7
P-4	E	G	4.3	4.3	15" RCP	14.50	1.00	6.5
P-5	F	H	0.5	3.6	15" RCP	28.00	0.50	6.5
P-6	G	H	0.9	3.3	15" RCP	144.00	0.88	9.9
P-7	H	FES	3.3	9.9	18" RCP	156.00	1.67	29.3
P-10	RISER	FES	1.3	24" RCP	1.50	0.00	1.67	—

VELOCITY DISSIPATOR DATA		SEDIMENT BASIN SCHEDULE		
PIPE NO.	VIA EXT. (F.S.)	DISSIPATOR SIZE	CLASS	D <sub>50</sub> (")
P-9	5.6	9'	B	6"
P-10	7.2	8'	B	6"

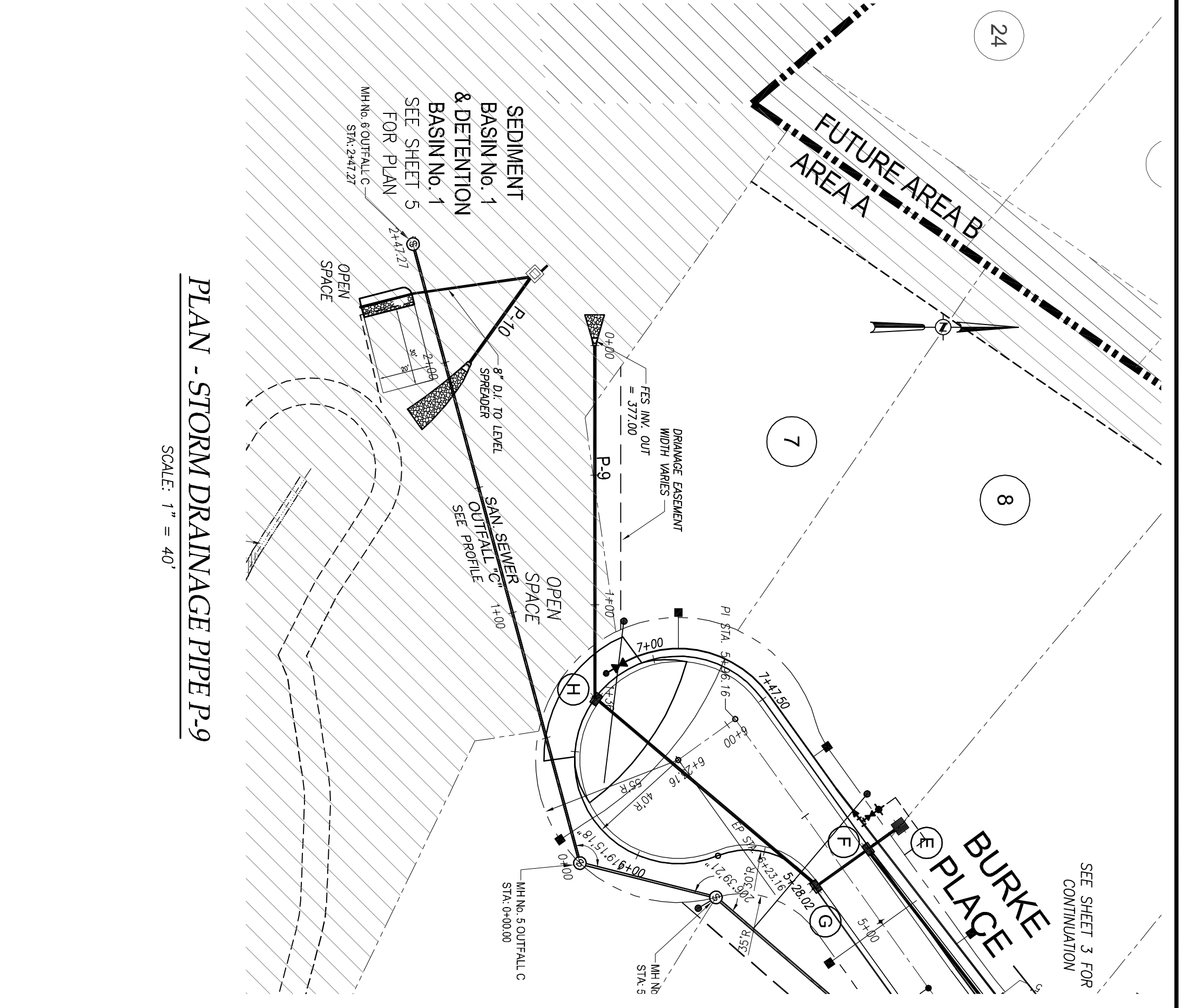
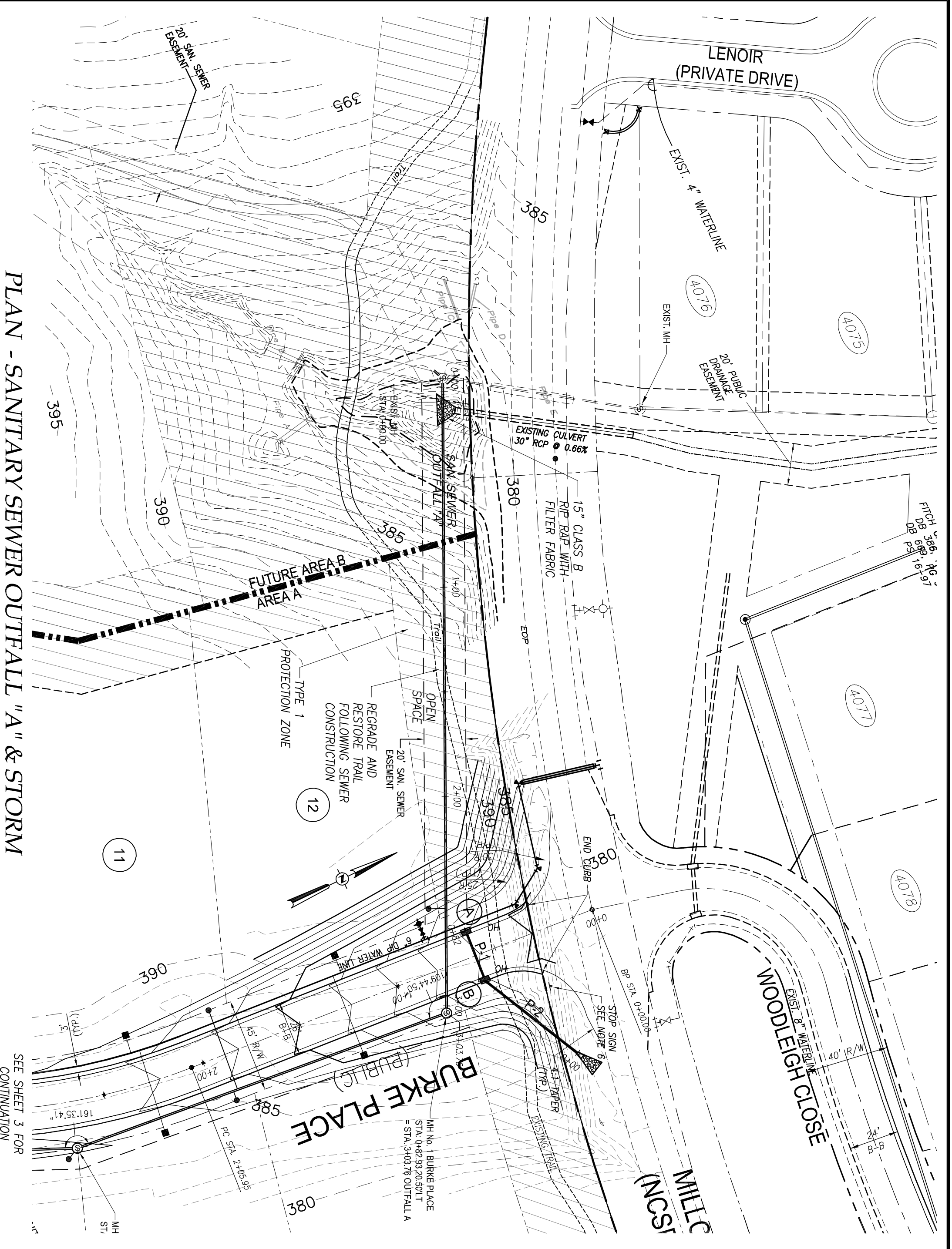
BSGN NO.	RETR/INLET AREA (AC)	TOTAL D.A. (AC)	SURFACE AREA (AC)	STORAGE (CU YD)	LENGTH (FEET)
SE-1	2.00	3.27	3.440	1 YEAR	4

PHASE 1 DISTURBED AREA A = 2.27 AC.      PHASE 2 REPAIRMENT RISER W/BS

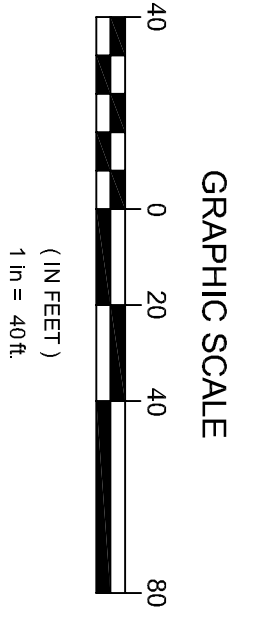
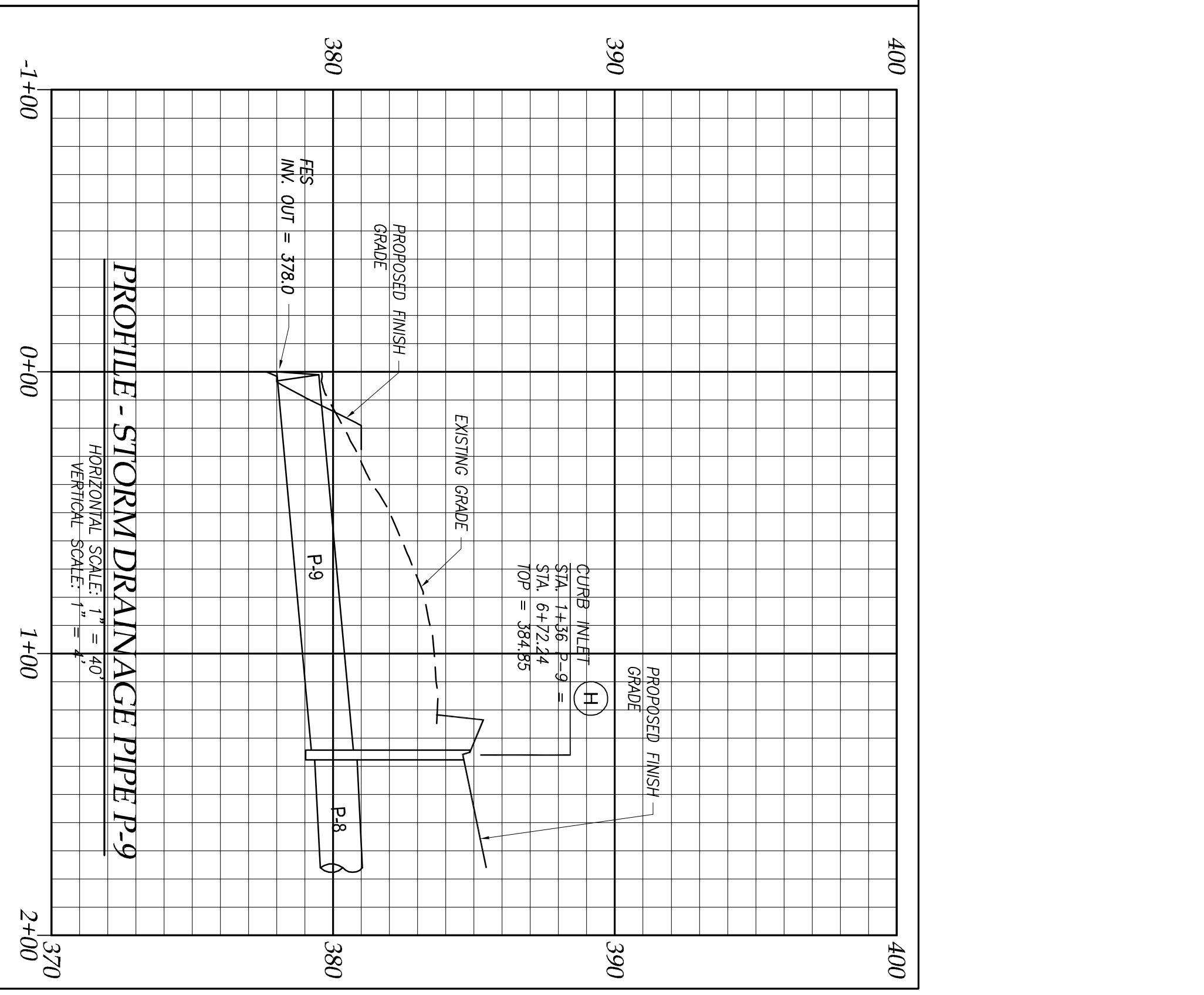
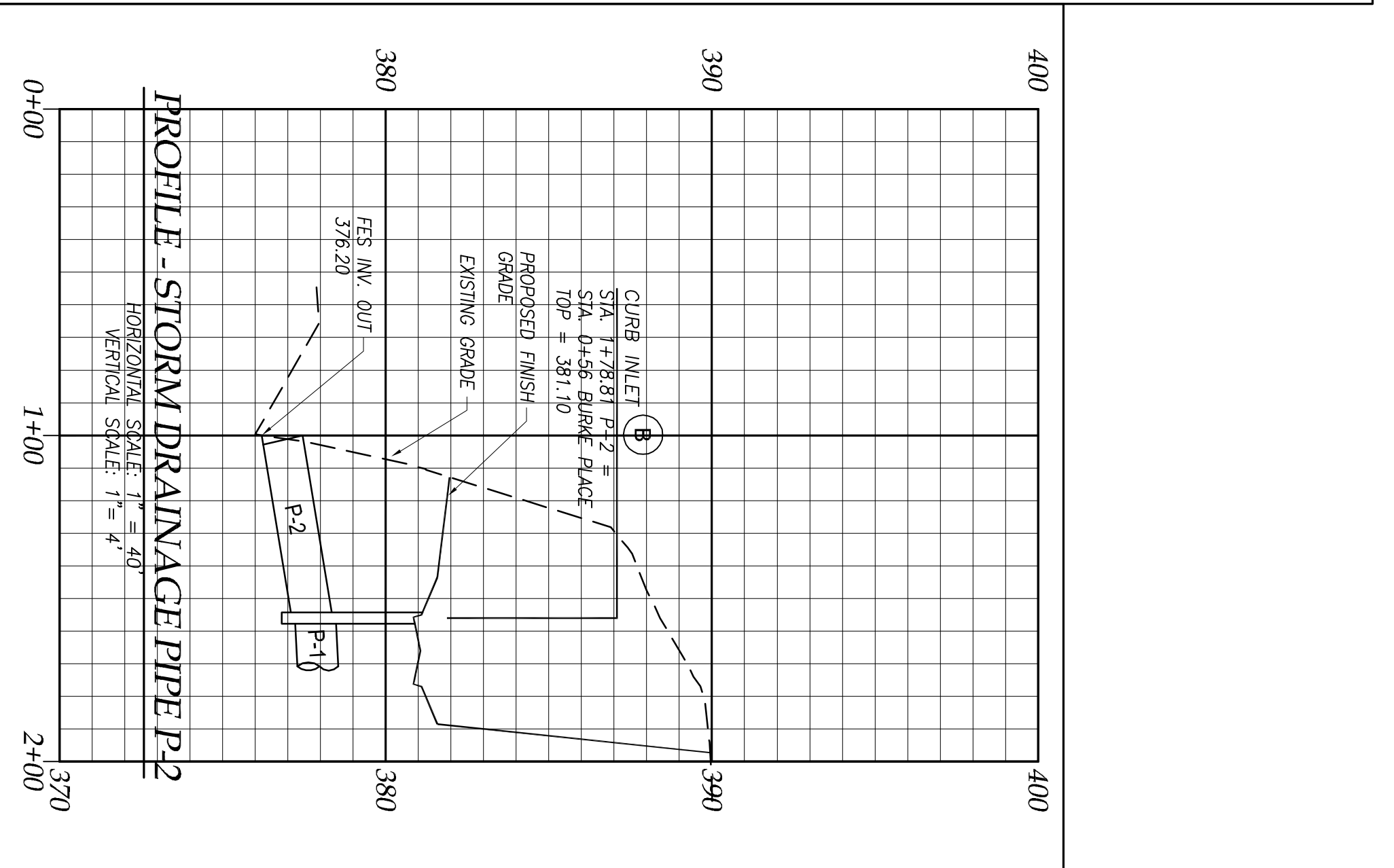
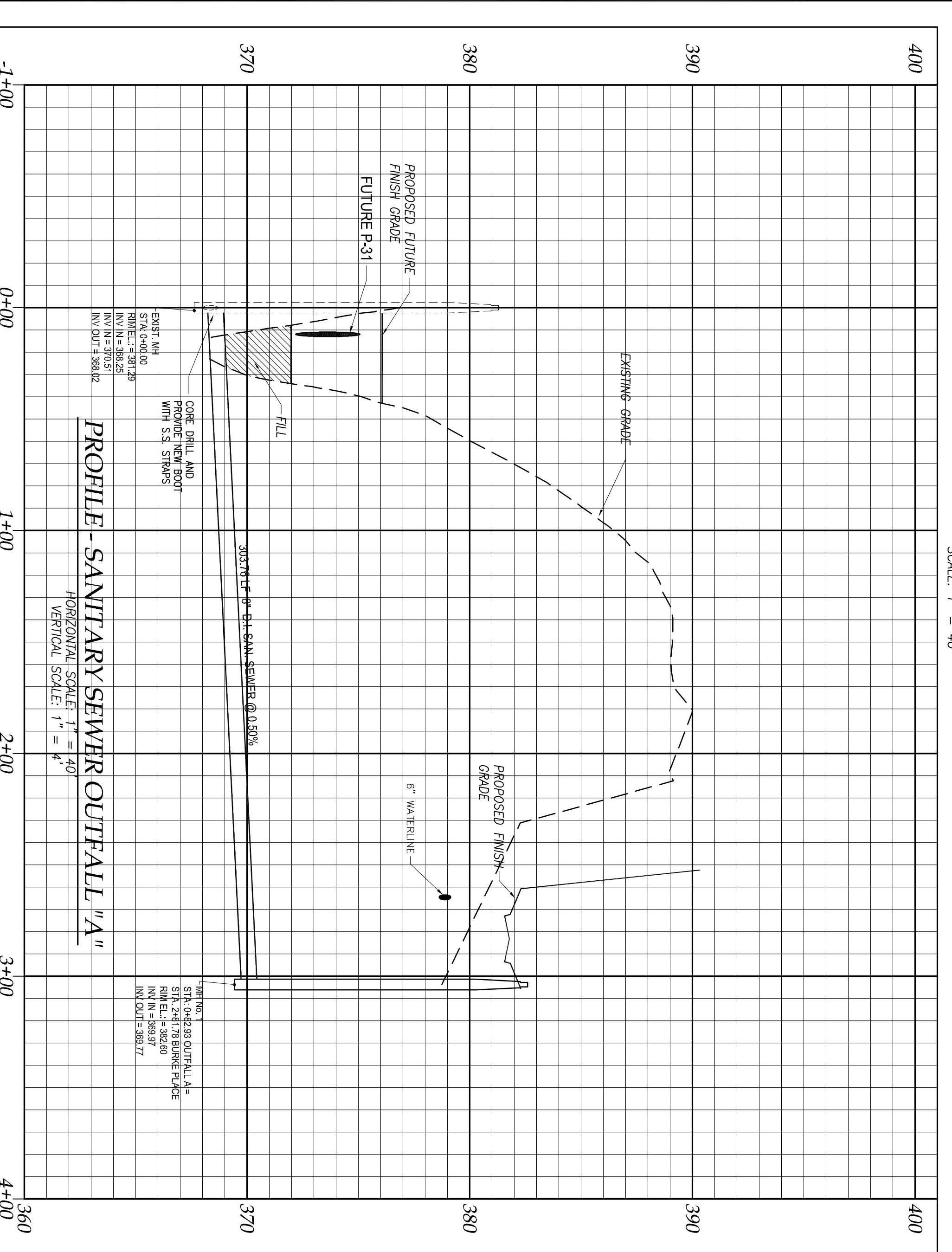


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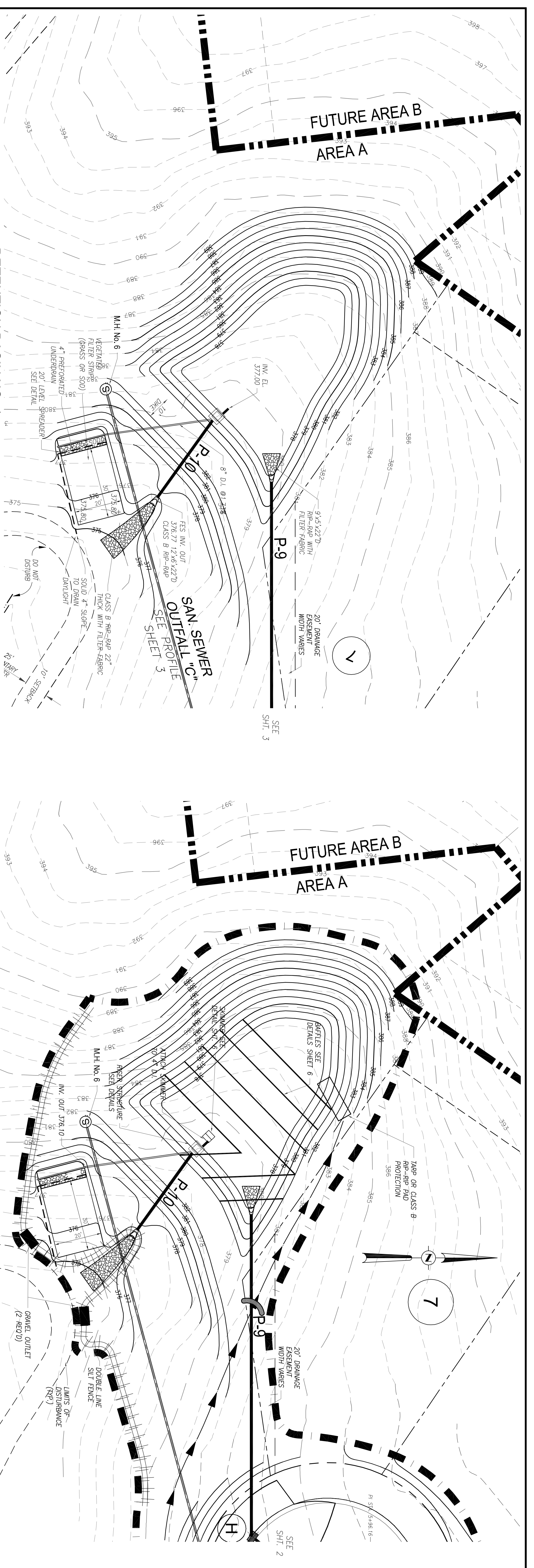




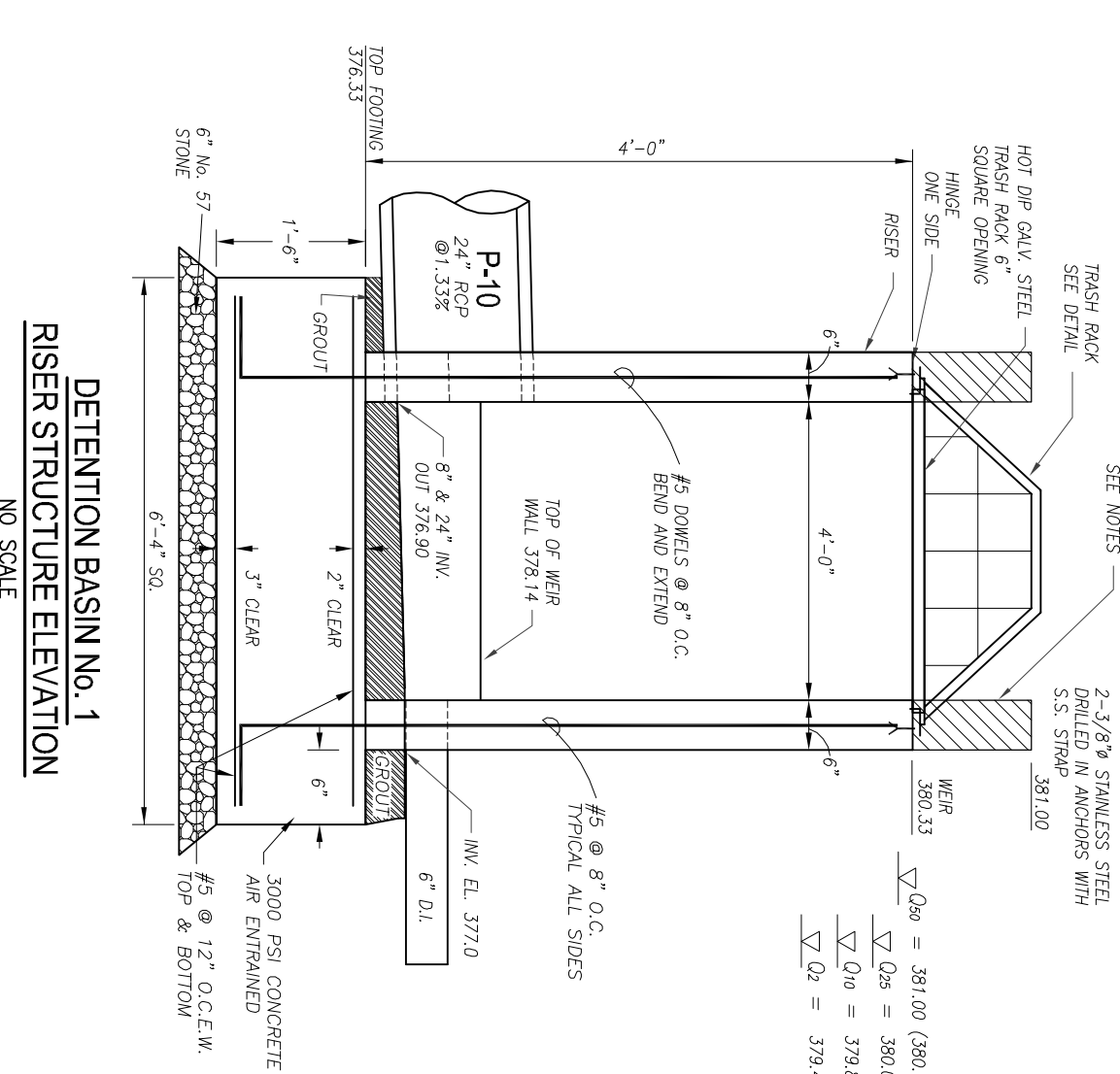
- GENERAL NOTES:**
1. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
  2. ALL WATER MAIN CONSTRUCTION SHALL BE IN COMPLIANCE WITH CHATHAM COUNTY PUBLIC UTILITIES STANDARDS AND SPECIFICATIONS.
  3. WATER MAIN SHALL BE OWNED AND OPERATED BY CHATHAM COUNTY PUBLIC UTILITIES.
  4. SANITARY SEWER SHALL BE OWNED AND OPERATED BY FITCH CREATIONS, INC.
  5. MAINTAIN CONSTANT 3'-0" MIN. COVER OVER WATERLINES EXCEPT AS REQUIRED TO CLEAR OTHER UTILITIES.
  6. RETROREFLECTIVE STOP SIGN PER NCOTD & MUTCD STANDARDS. MOUNT ON 350 CRASH COMPLAINT POST.



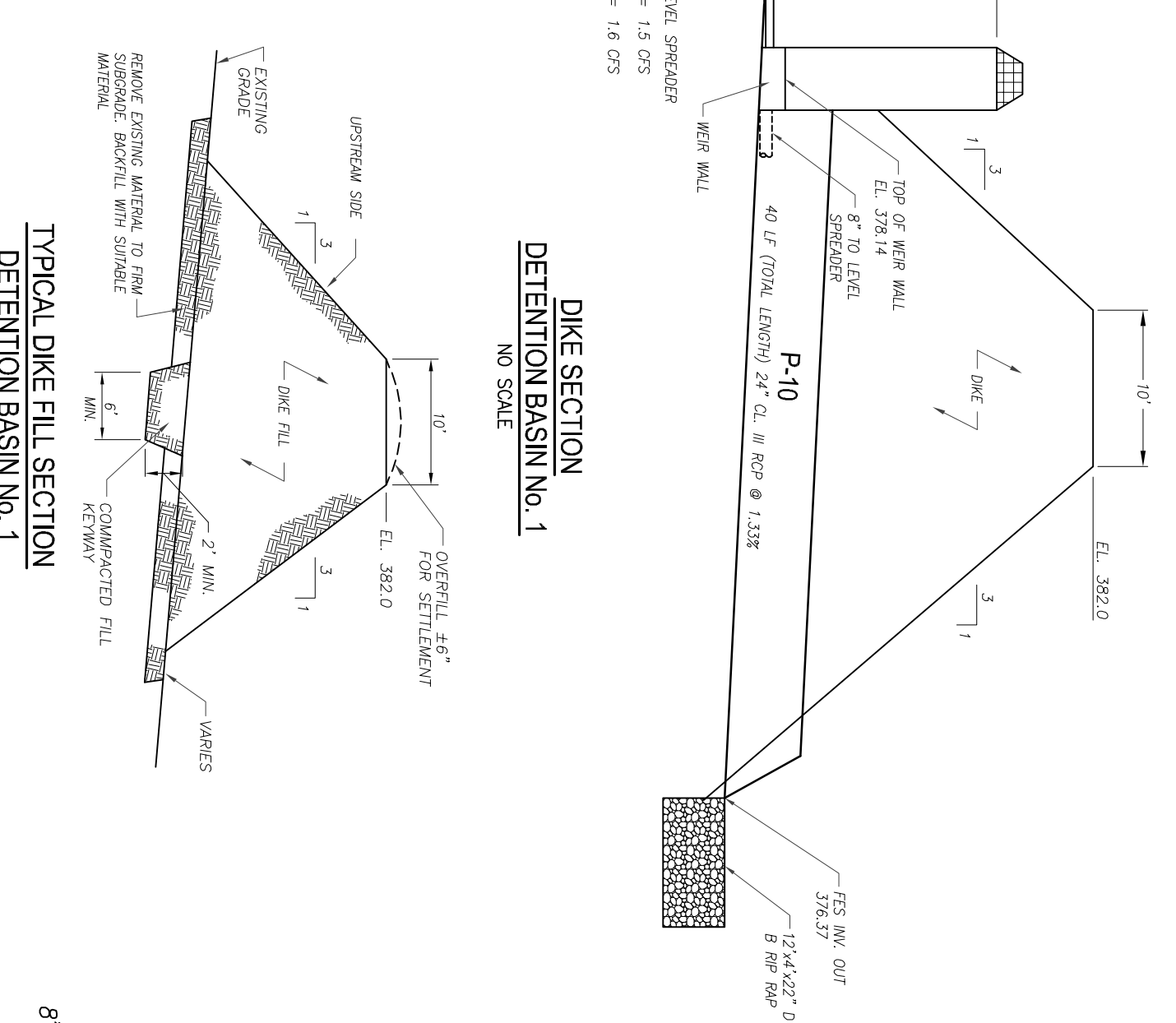
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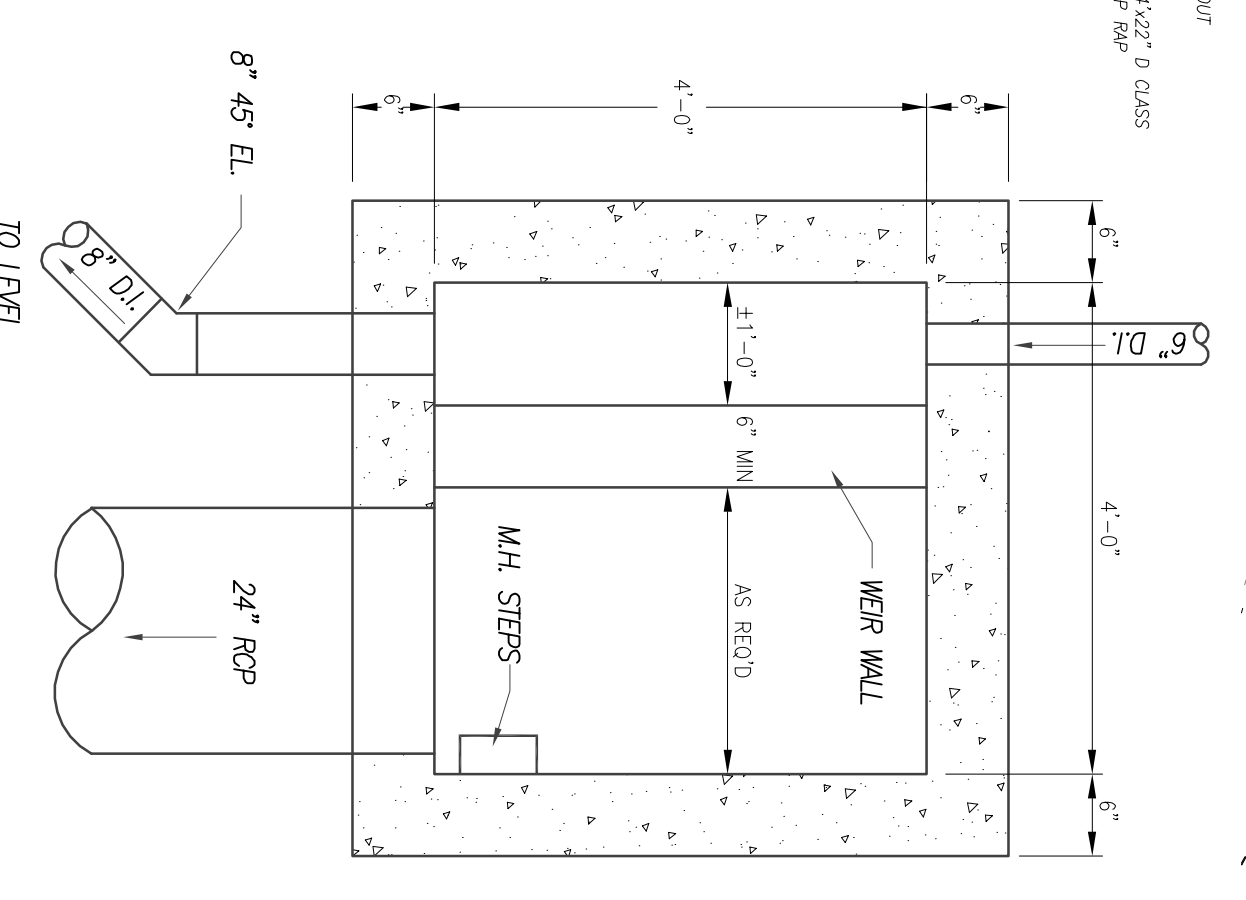
**DETENTION BASIN NO. 1**  
SCALE: 1" = 20'



**DETENTION BASIN NO. 1**  
RISER STRUCTURE ELEVATION  
NO SCALE

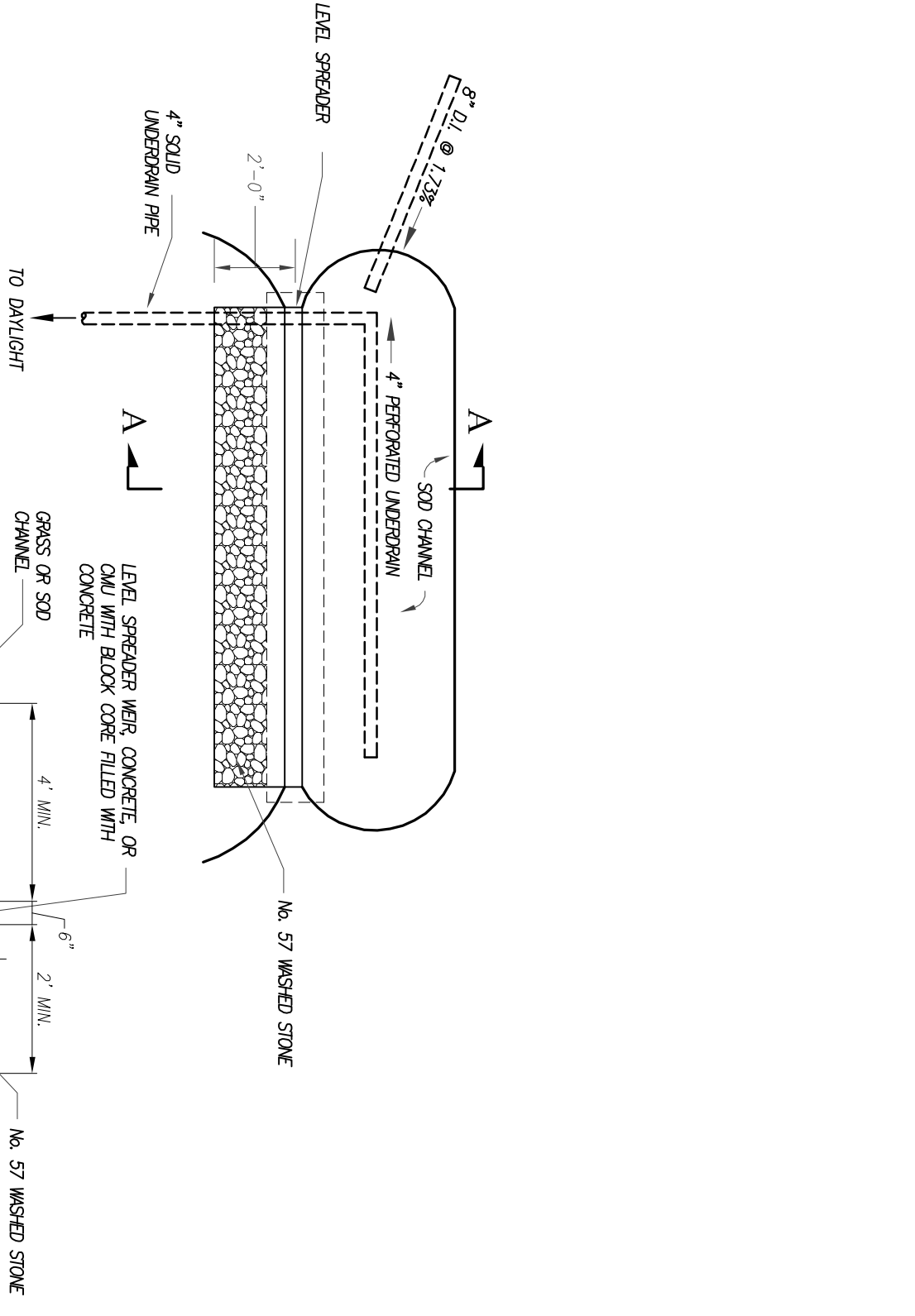


**DETENTION BASIN NO. 1**  
DIKE SECTION  
NO SCALE



**DETENTION BASIN NO. 1**  
RISER STRUCTURE PLAN  
NO SCALE

**SEDIMENT BASIN NO. 1**  
SCALE: 1" = 20'



**DETENTION BASIN NO. 1**  
LEVEL SPREADER DETAIL  
NO SCALE

**NOTES:**

1. CONSTRUCT DIKE, P-10, AND RISER STRUCTURE WITHOUT WIER WALL. PROVIDE TEMPORARY SEDIMENT BASIN NO. 1. CONSTRUCT PER 200' SPAN AT P-10 OUTLET.
2. INSTALL SUMMER USING 4" O.D. DRAIN, IN RISER RISER STRUCTURE.
3. PROVIDE TEMPORARY PILE IN 4" O.D. TO LEVEL SPREADER.
4. CONSTRUCT LEVEL SPREADER TO RAISE TOP OF RISER TO EL. 380.00. STAND OF GRASS.
5. FOLLOWING CONSTRUCTION AND PERMISSION TO REMOVE SEDIMENT BASIN, REMOVE SUMMER, Baffles, TEMPORARY MASONRY, TEMPORARY 8" RIGID INSUL WIER WALL, FRESH ROCK CLEAR SEDIMENT FROM BOTTOM OF MANHOLE P-9-MH-194, PAVEN, SEED AND STABILIZE BASIN BOTTOM.

**NOTE:**

1. DIKE FILL MATERIAL AND PLACEMENT SHALL BE ACCORDING TO THE RECOMMENDATIONS OF THE OWNER'S GEOTECHNICAL ENGINEER. PROVIDE PROOF OF TESTING PER ASTM METHOD D-1586 (ASTM D-1586) STANDARD PROCTOR.
2. NO WOODY MATERIAL SHALL BE ALLOWED ON DIKE SLOPES.
3. PRECAST RISER IS ALLOWABLE WITH ENGINEER'S APPROVAL OF SHOP DRAWING. PROVIDE BLOWNOWN ANCHOR.

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**SEEDBED PREPARATION**

- 1) Chase compacted areas and spread topsoil 3 inches deep over diverse soil conditions, if available.
- 2) Remove all debris, rocks, roots, and other obstructions leaving surface reproductively smooth and uniform.
- 3) Remove all loose rock, roots, and other obstructions uniformly and mix with soil (see below).
- 4) Apply agricultural lime, fertilizer, and superphosphate uniformly.
- 5) Continue tillage until a well-plowed, firm, reasonably uniform seedbed is prepared 4 to 6 inches deep.
- 6) Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment of adequate depth.
- 7) Muck immediately after seeding and other muck.
- 8) Inspect all seeded areas and make necessary repairs or reseedings promptly. Reestablish original lines, fertilizer and seeding rates, dampest, reestablish following original lines, fertilizer and seeding rates.
- 9) Control Erosion Control Officer negligence treatment and fertilization after permanent cover is established.

**SEEDING SCHEDULE**  
Shoulders, Side Ditches, Slopes (MAX. 3:1)

Date	Types	Planting Rate
Aug 15-Nov 1	Tail Feature	300 lbs./acre
Nov 1-Apr 1	K & A	300 lbs./acre
Nov 1-Apr 1	K & A	300 lbs./acre
Nov 1-Apr 1	Tail Feature	300 lbs./acre
Apr 15-June 30	Hilled Common Bermudagrass	25 lbs./acre
Jul 1-Sept 30	Hilled Common Bermudagrass	25 lbs./acre
Oct 1-Dec 31	Tail Feature 900	120 lbs./acre
Nov 1-Apr 1	** St. Augustine-Sudan Hybrids	30 lbs./acre
Nov 1-Apr 1	** St. Augustine-Sudan Hybrids	30 lbs./acre

Apply: Agricultural limestone - 2 tons/acre (3 tons/acre in clay soils)  
Fertilizer - 1,000 lbs./acre - 10-10-10  
Muck - 50 lbs./acre - 10-10-10  
Anchor - Asphalt Emulsion @ 500 gals./acre

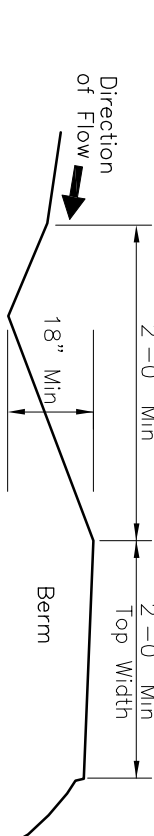
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Special Operations Engineer or Soil Conservation Section for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation code are those which do well under local conditions, other seeding rates combinations are possible. For a best quality turf, double or triple codes.

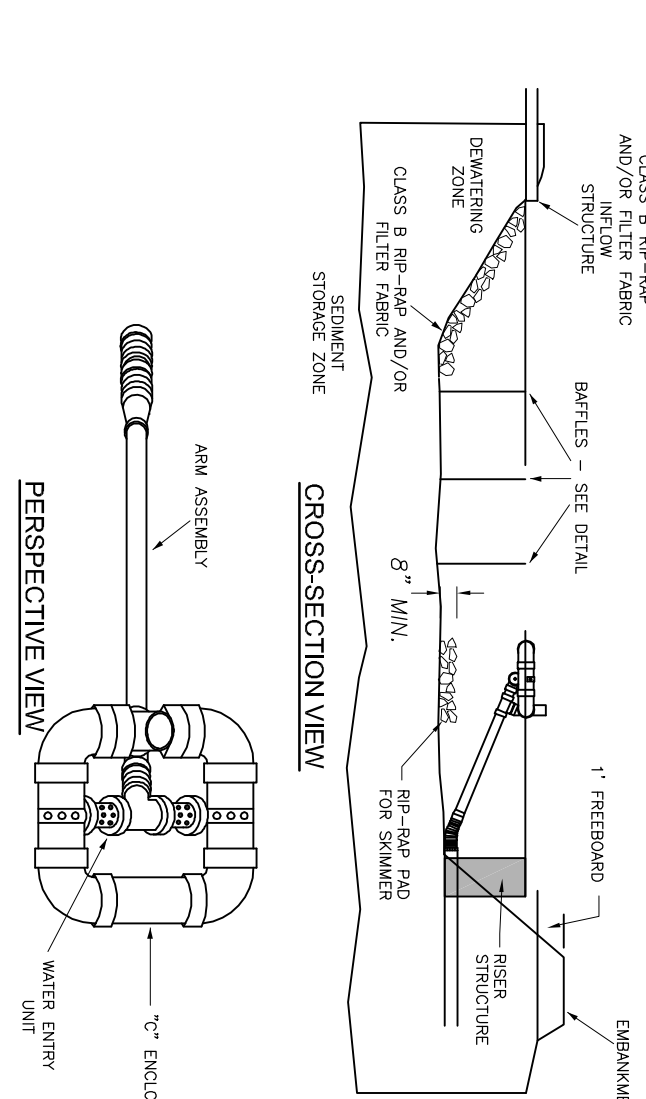
\*\*Temporary - Revised according to optimum season for desired permanent vegetation

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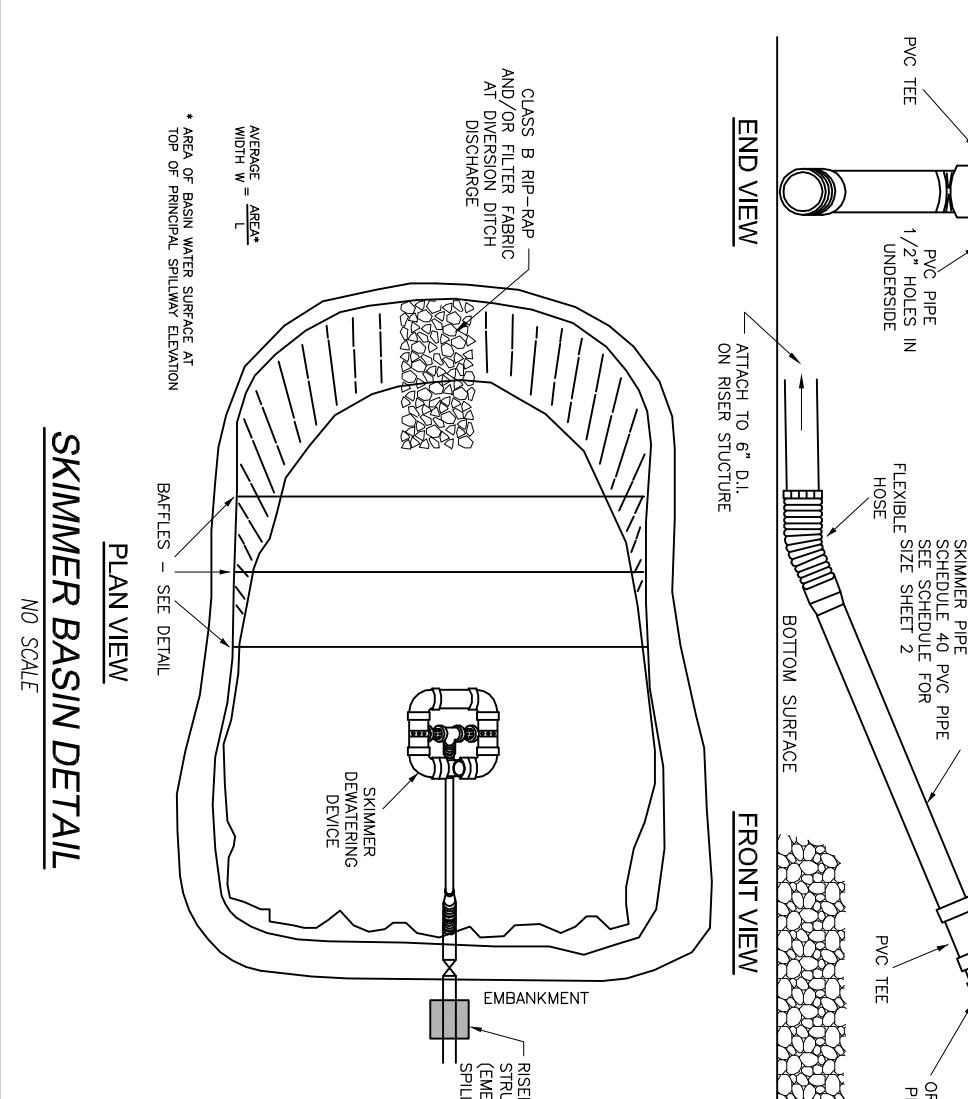
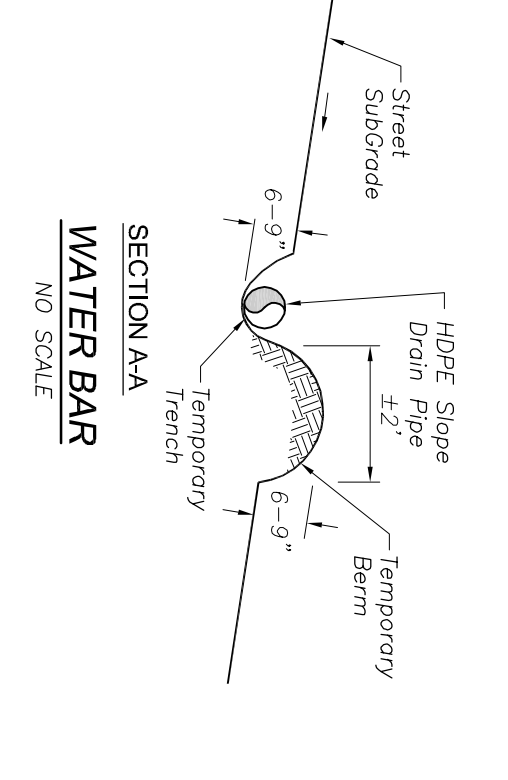
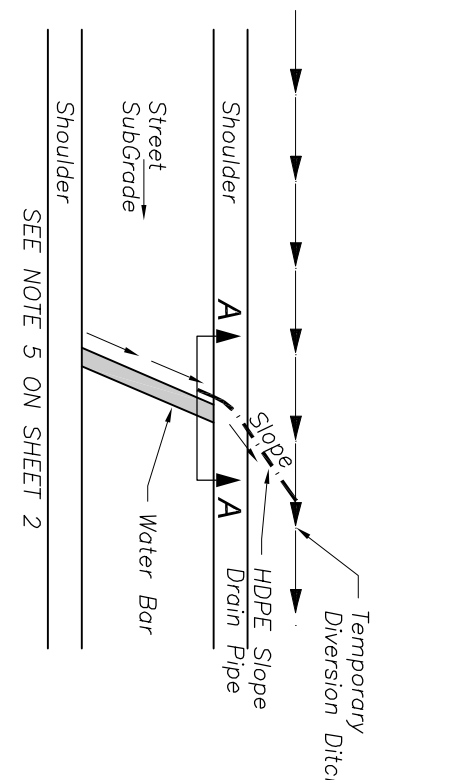
**TEMPORARY DIVERSION SWALE DETAIL**

**Maintenance**  
Inspect temporary diversions once a week and after every rainfall. Immediately remove sediment from the flow area and repair the diversion using. Continually check covers and make timely repairs. From time to time the diversion shall be inspected for stability. If the diversion channel is found with the natural ground level and approximately stabilize it.



**VELOCITY DISSIPATION APRON**

NO SCALE

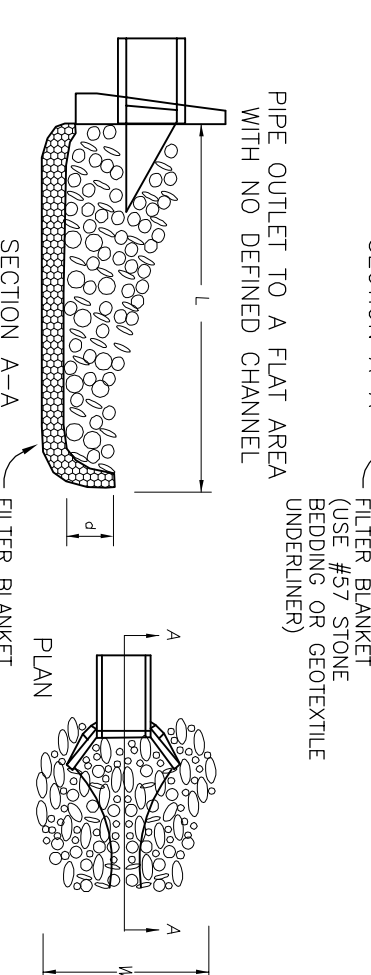
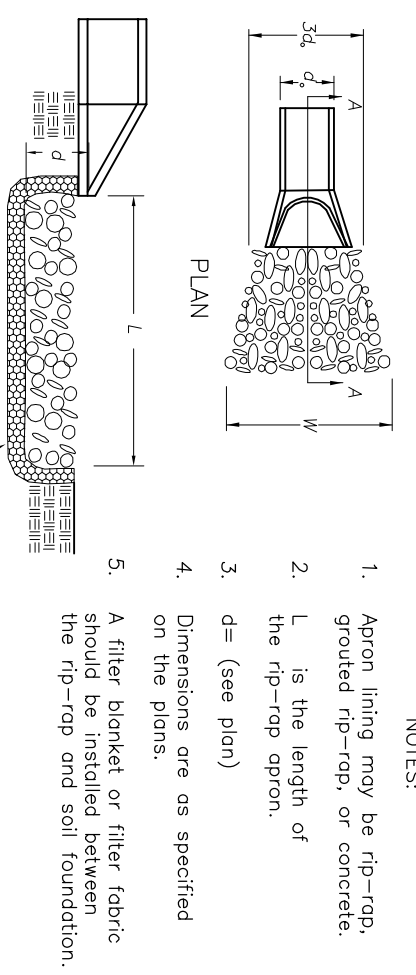


**CONSTRUCTION SEQUENCE**

1. Obtain grading permit.
2. Clear and grub for all fence, entrance and all fill areas. Clear only as required for all fence, entrance and all fill areas.
3. Construct sediment basins. Stabilize immediately.
4. Call (919) 545-8434 for on-site inspection by an Erosion Control Officer if approved, before clearing and grubbing.
5. Obtain permit from NC Wildlife Resources Commission for any work on riparian habitat.
6. Proceed with construction of diversion structures, including but not limited to, check dams, stone check dams, water bars, culverts, etc. as needed. Stabilize pipe outlet areas before pipe construction.
7. Install utility and storm drainage. Provide final protection for all areas.
8. Stabilize sites on areas are brought up to finish grade with vegetation, seeding, etc. The single for graded slopes and fill spoil cover or other adequate erosion control devices or structures, in any event, slopes left exposed all, within 21 calendar days of completion of construction.
9. Provide final protection for all areas.
10. Notify Erosion Control Officer, and all signs are established, completely, call for inspection by Erosion Control Officer.
11. If site is approved, remove temporary diversions, fill fencing, etc. immediately. See sediment basin construction notes.
12. When vegetation has been established, call for final site inspection by Erosion Control Officer.
13. Obtain Certificate of Completion.

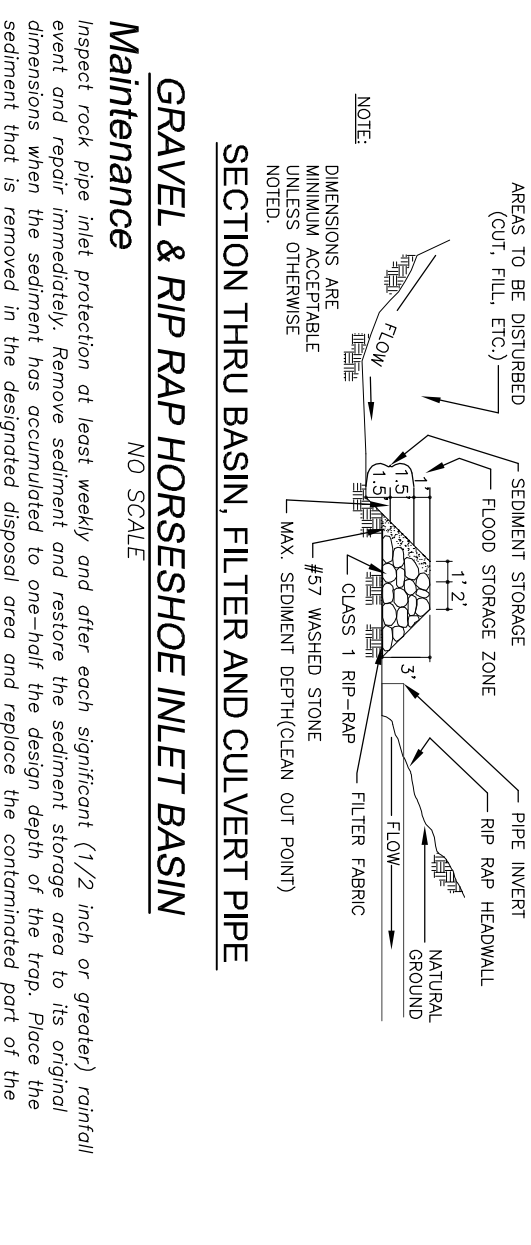
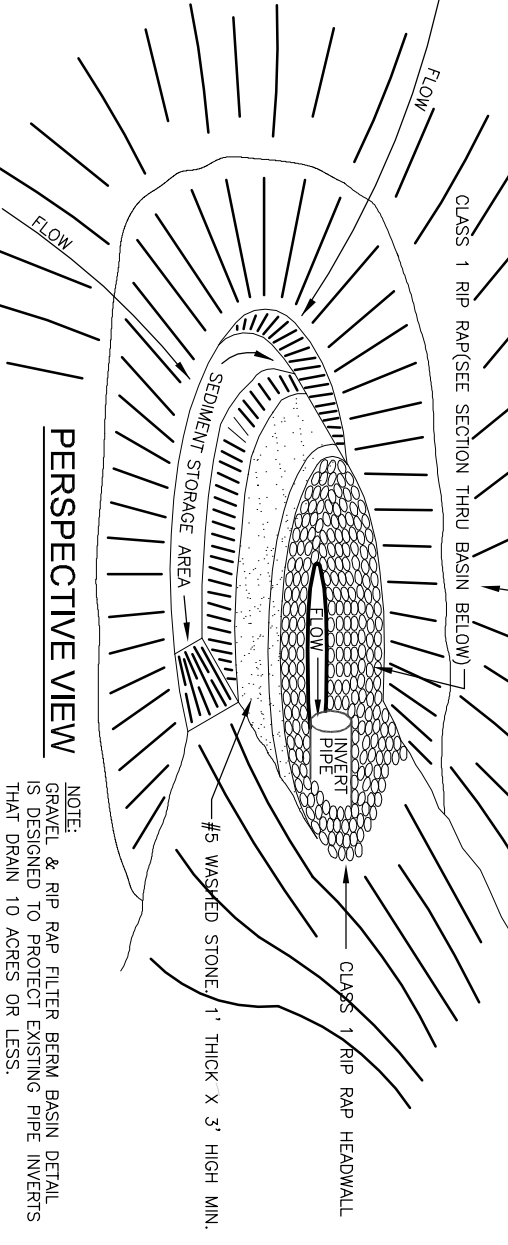
**SEDMANT BASIN CONVERSION**

1. Remove sediment.
2. Remove sediment.
3. Remove sediment and dispose on approved site.
4. Good sediment basin to detention basin final contours.
5. Good and stabilize slopes.
6. Call for on-site inspection by Erosion Control Officer.
7. When site is fully stabilized, call Erosion Control Officer for approval of removing remaining temporary erosion control measures and for final site inspection by Erosion Control Officer.



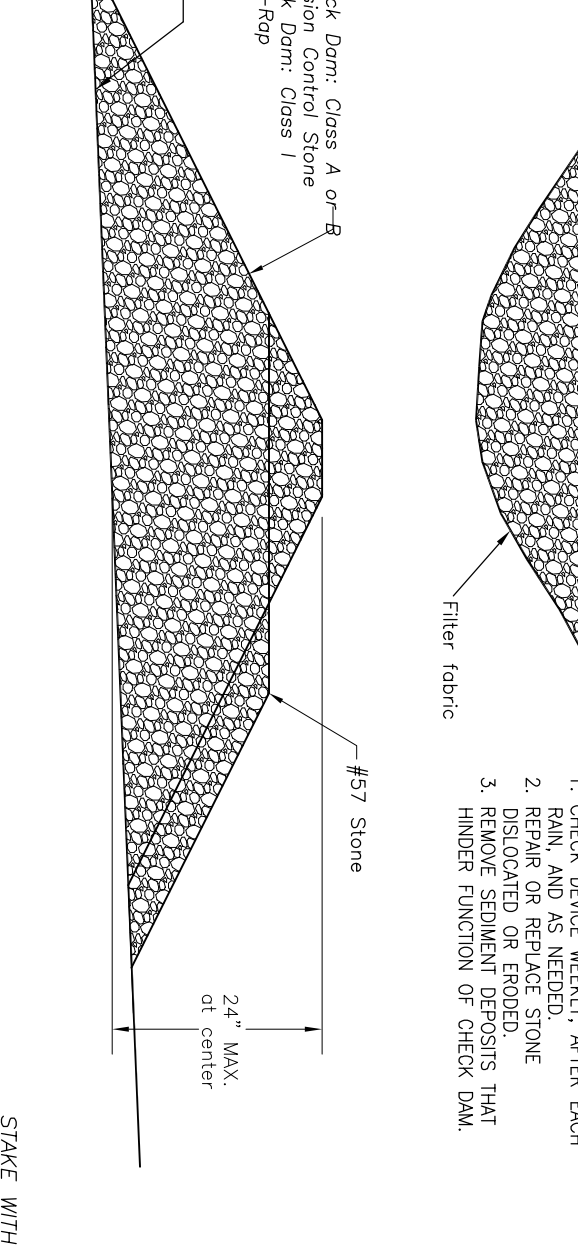
**GRAVEL & RIP RAP HORSESHOE INLET BASIN**

NO SCALE



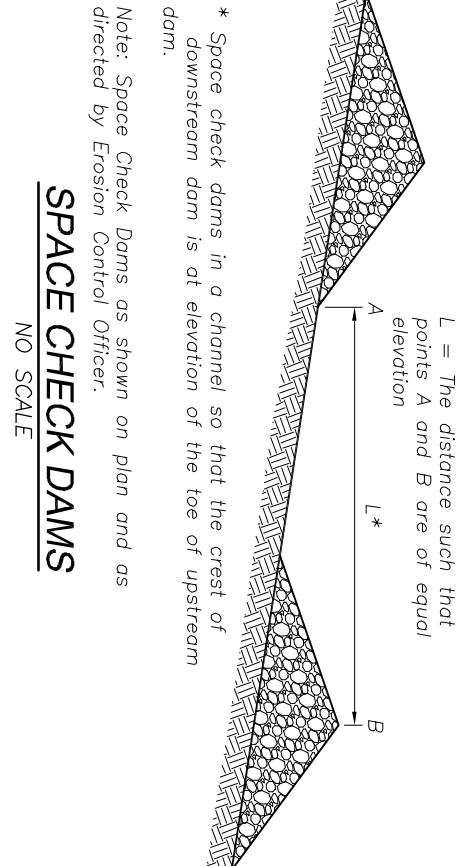
Check the structure for damage. Any riprap displaced from the stone horsehoe must be replaced immediately.

After the sediment-producing areas have been permanently stabilized, remove the structure and all the rip rap material. Rip rap shall be stored with the sediment and placed in a designated area.



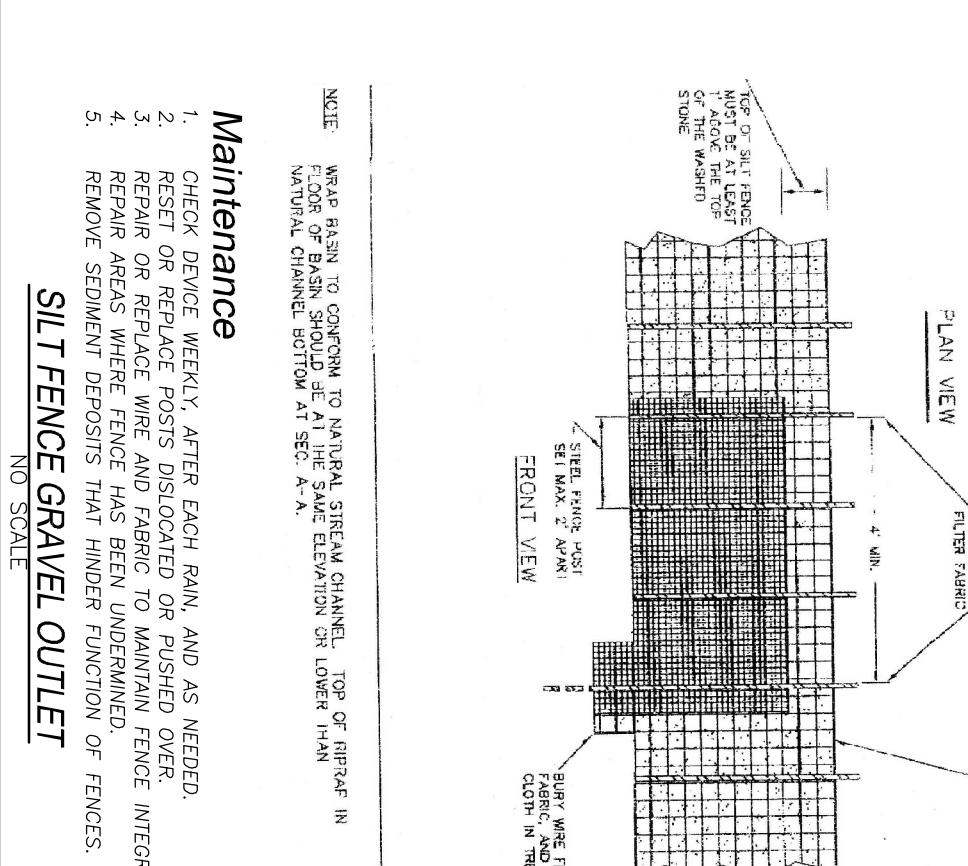
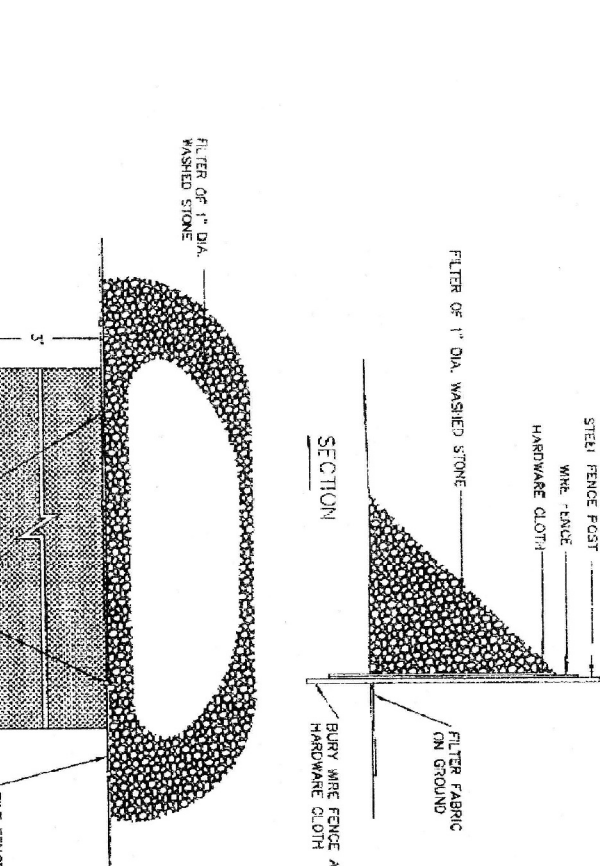
**TEMPORARY STONE CHECK DAM/ROCK DAM**

NO SCALE



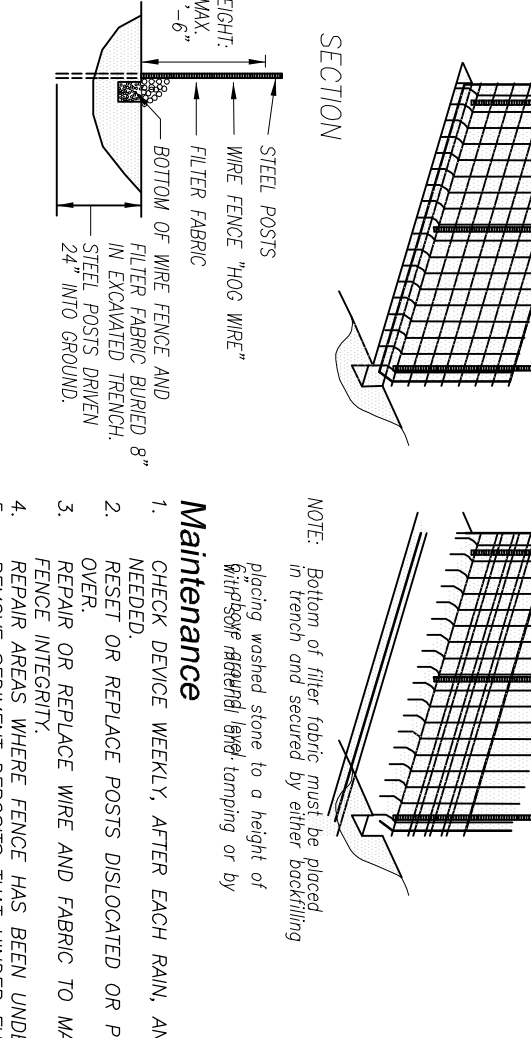
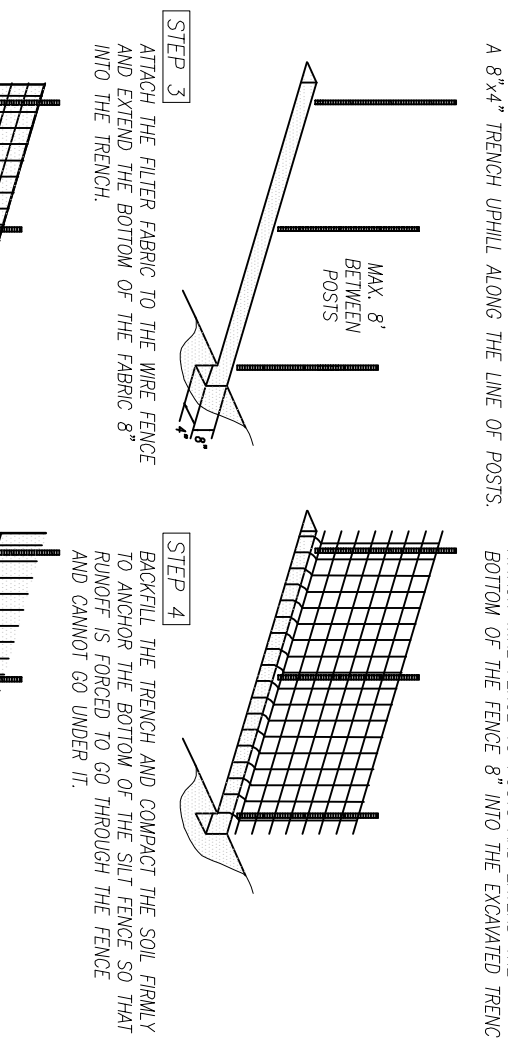
**SPACE CHECK DAMS**

NO SCALE



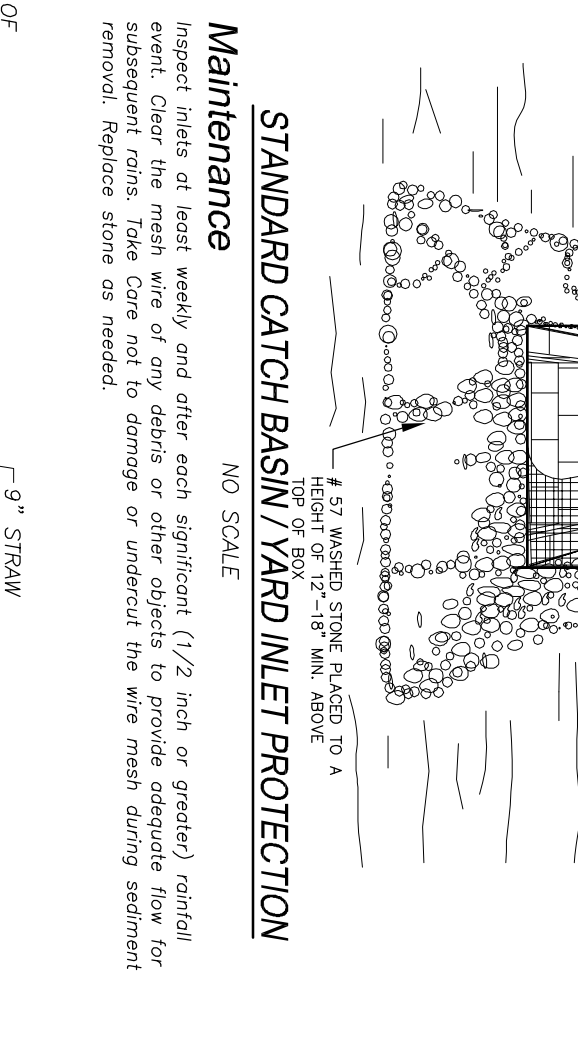
**SILT FENCE**

NO SCALE



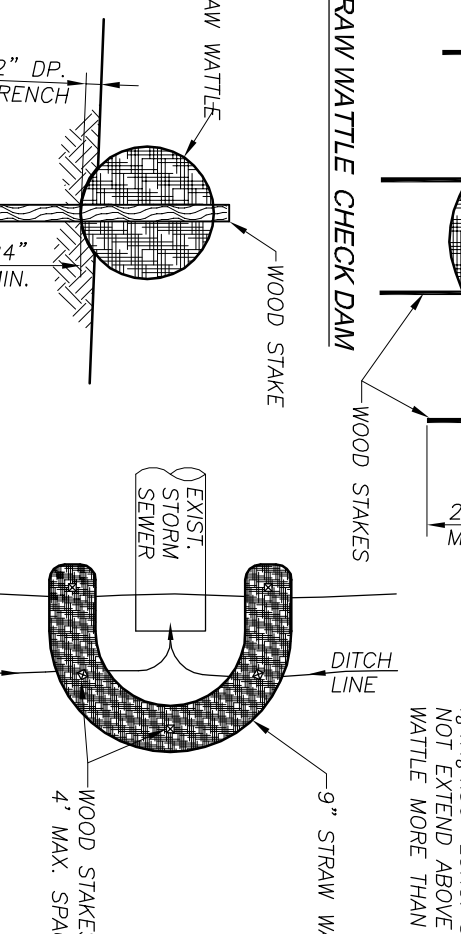
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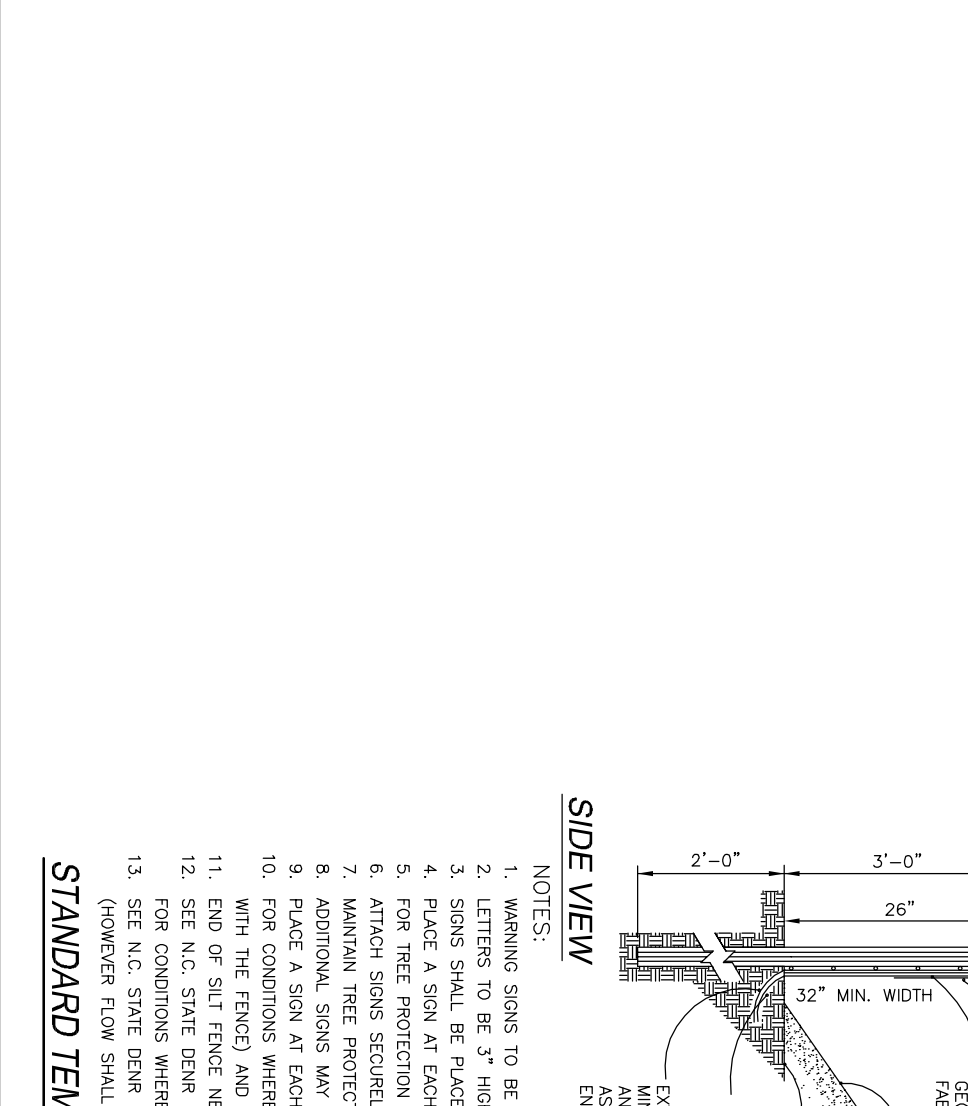
**STANDARD CATCH BASIN / YARD INLET PROTECTION**

NO SCALE



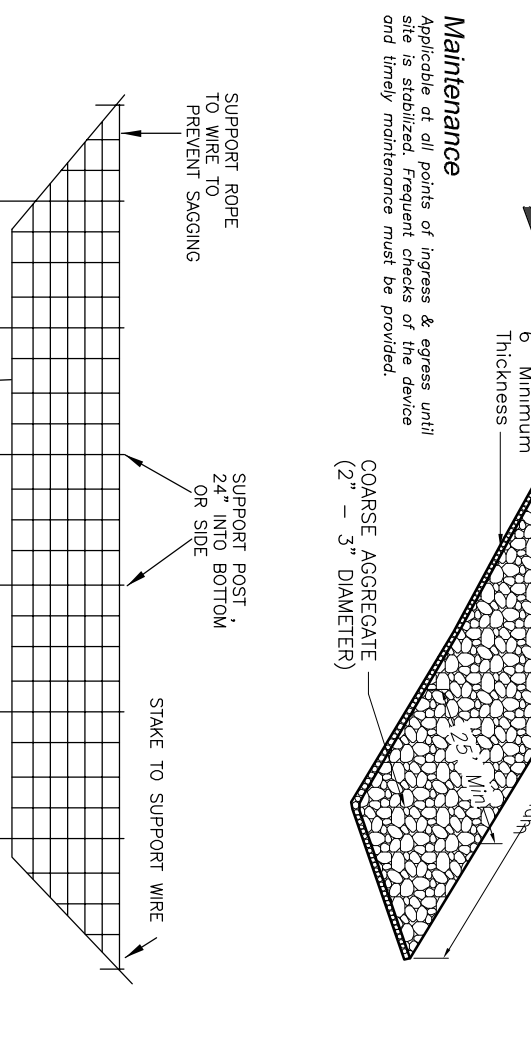
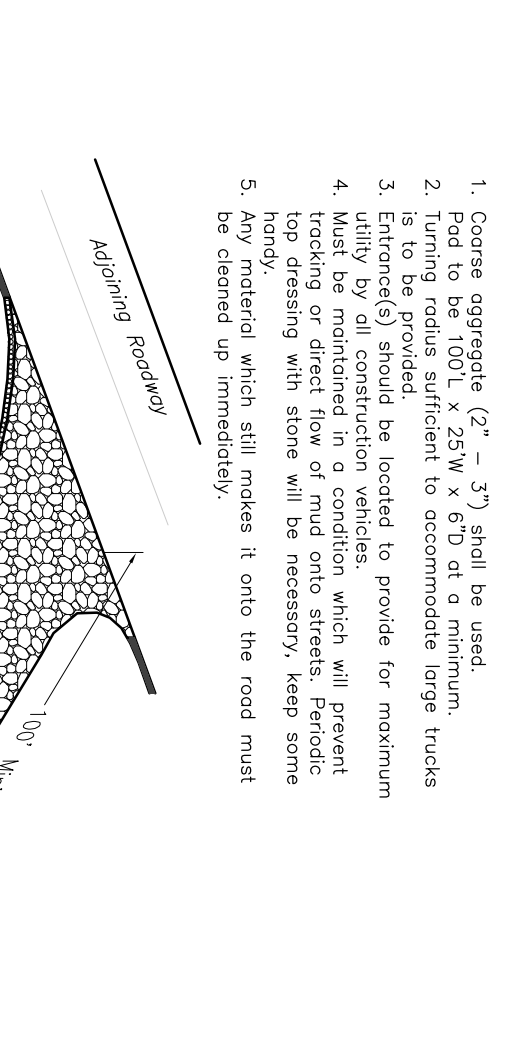
**STRAW WATTLE INSTALLATION DETAILS**

NO SCALE



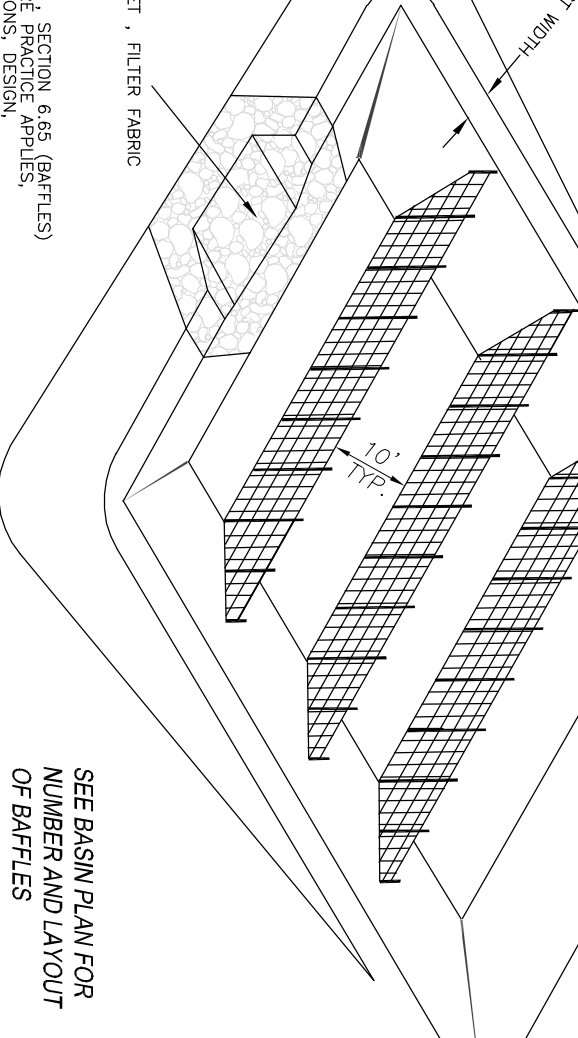
**TEMPORARY GRAVEL CONSTRUCTION ENTRANCE**

NO SCALE



Check the structure for damage. Any riprap displaced from the stone horsehoe must be replaced immediately.

After the sediment-producing areas have been permanently stabilized, remove the structure and all the rip rap material. Rip rap shall be stored with the sediment and placed in a designated area.



**BAFFLE DETAIL**

NO SCALE

