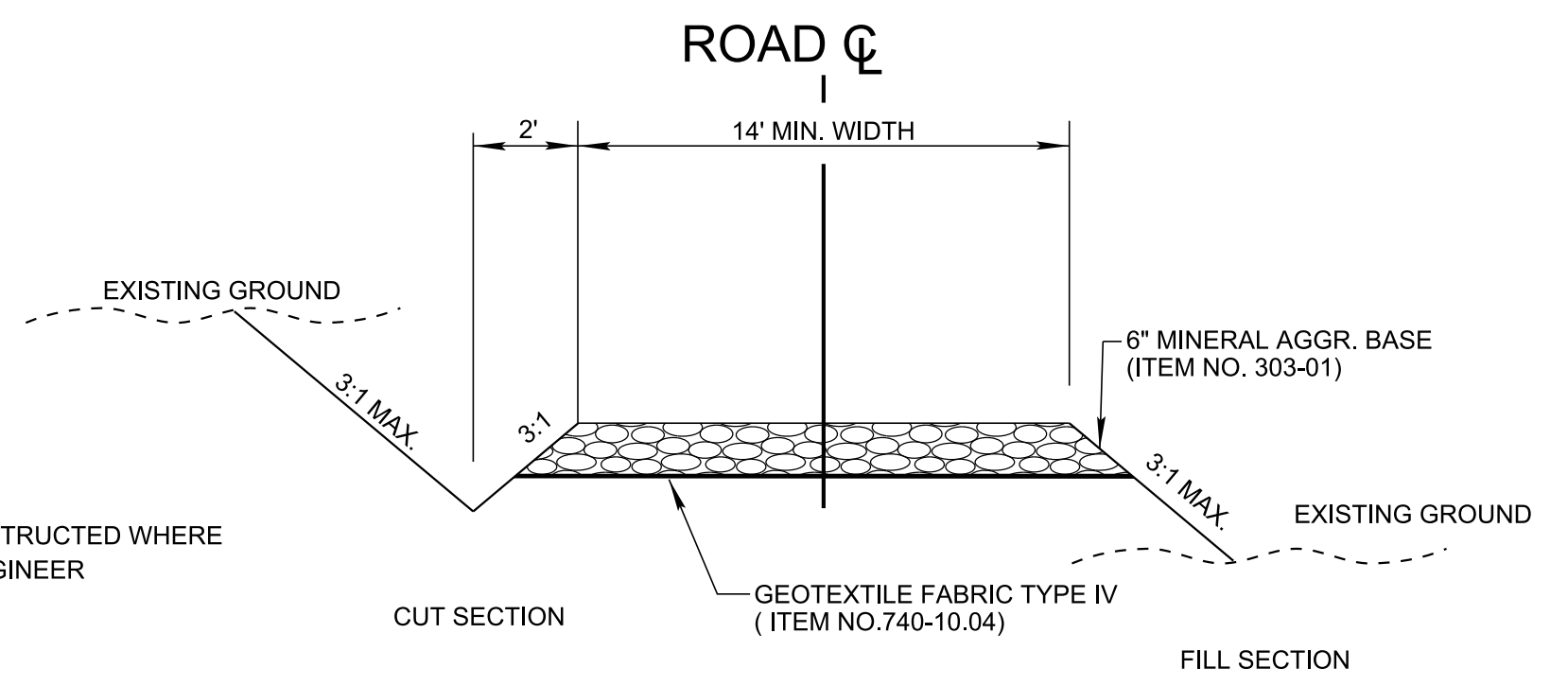


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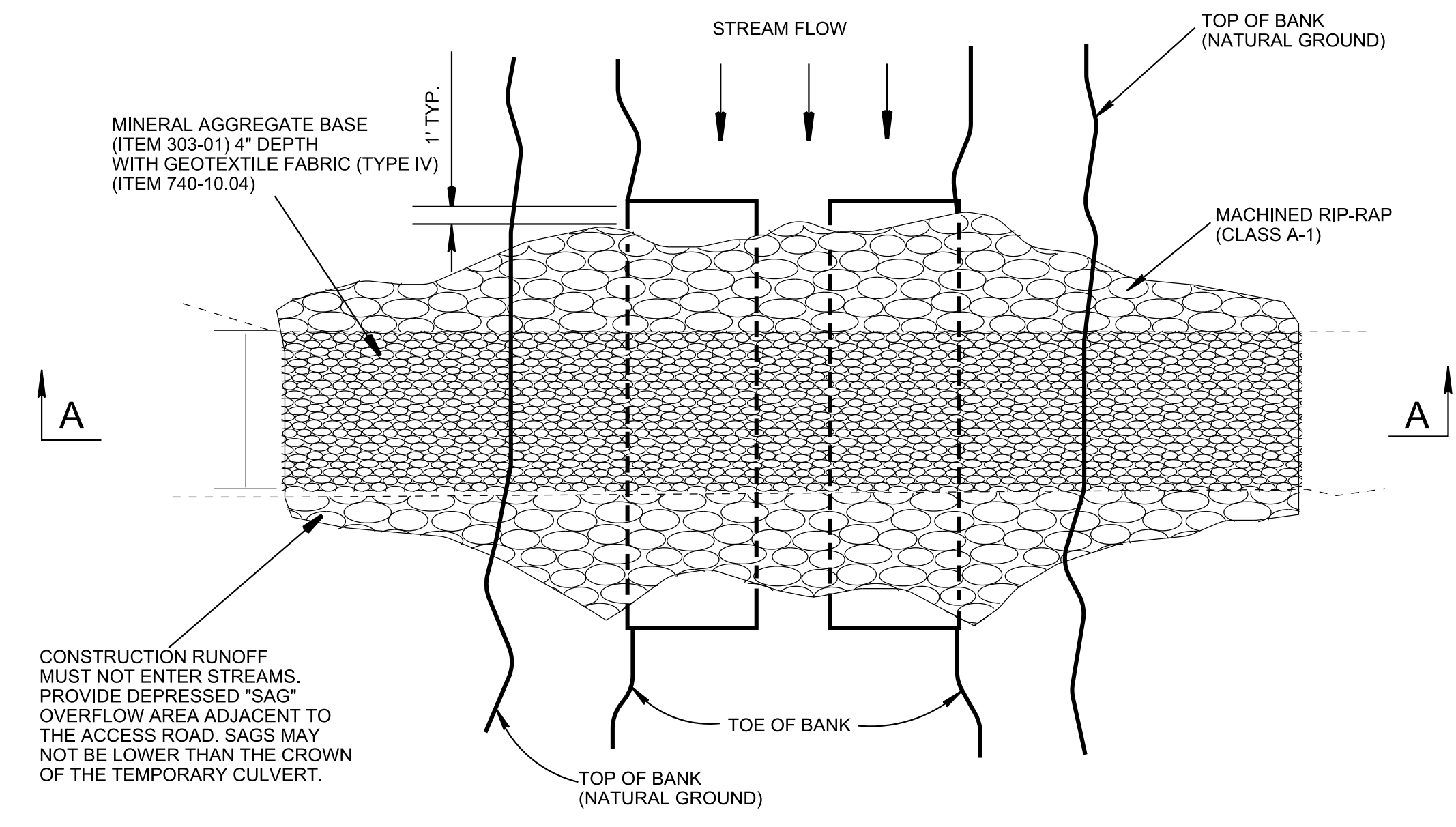
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CAD FILE:	
ENGR./ARCH.:	AP
DESIGN BY:	DZ
DRAWN BY:	DZ
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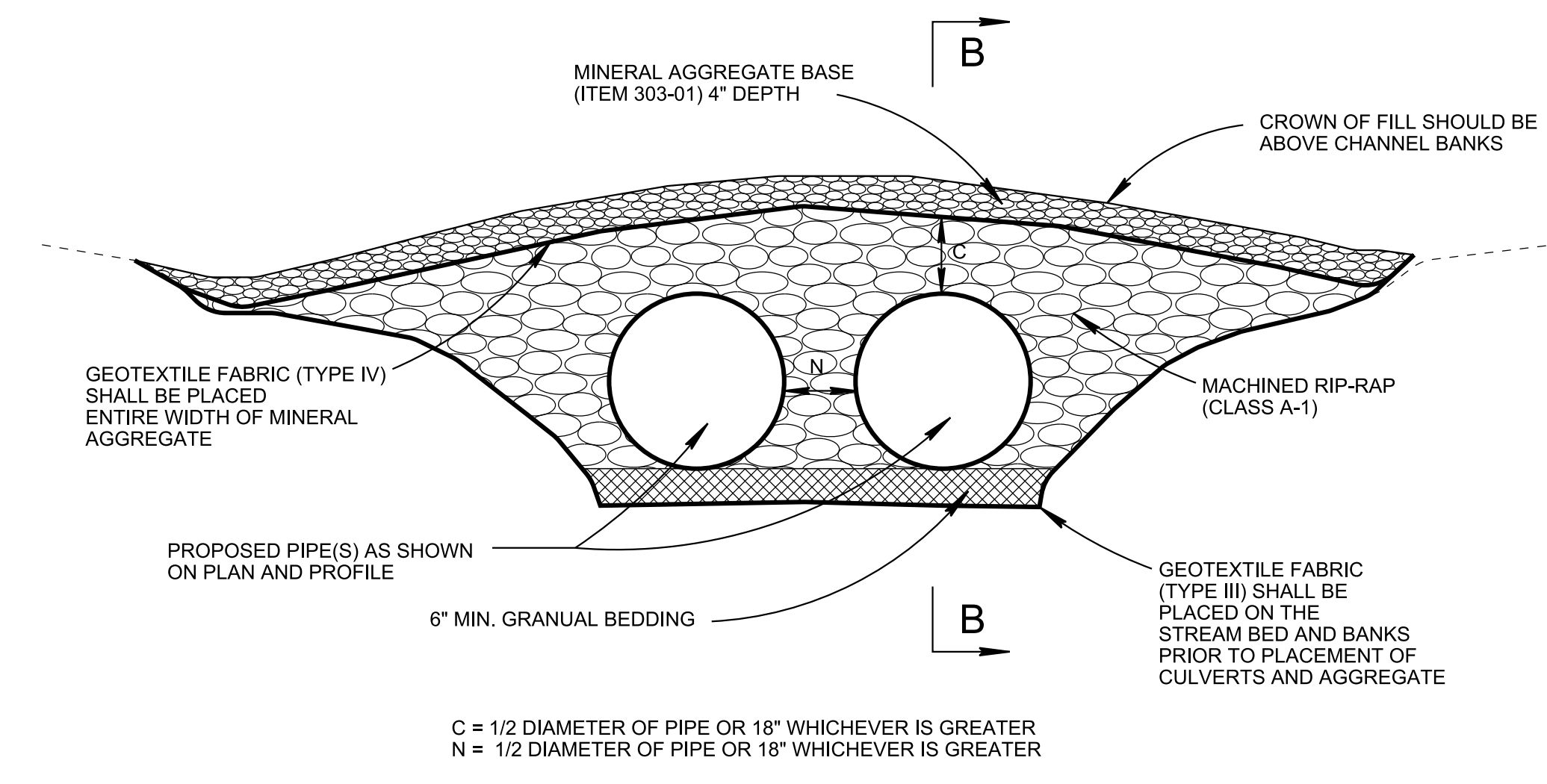
DETAILS



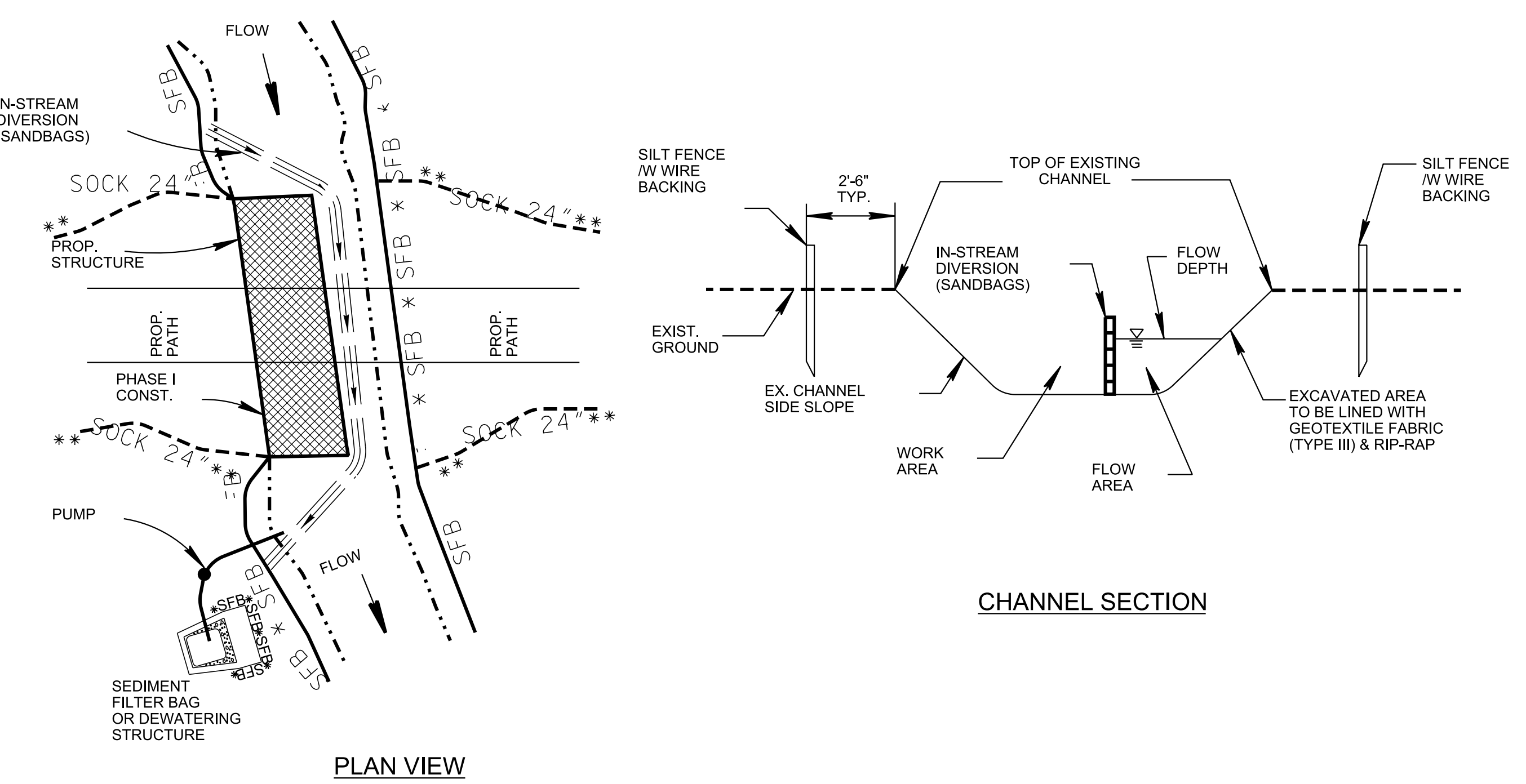
NOTE: DITCH TO BE CONSTRUCTED WHERE DIRECTED BY THE ENGINEER



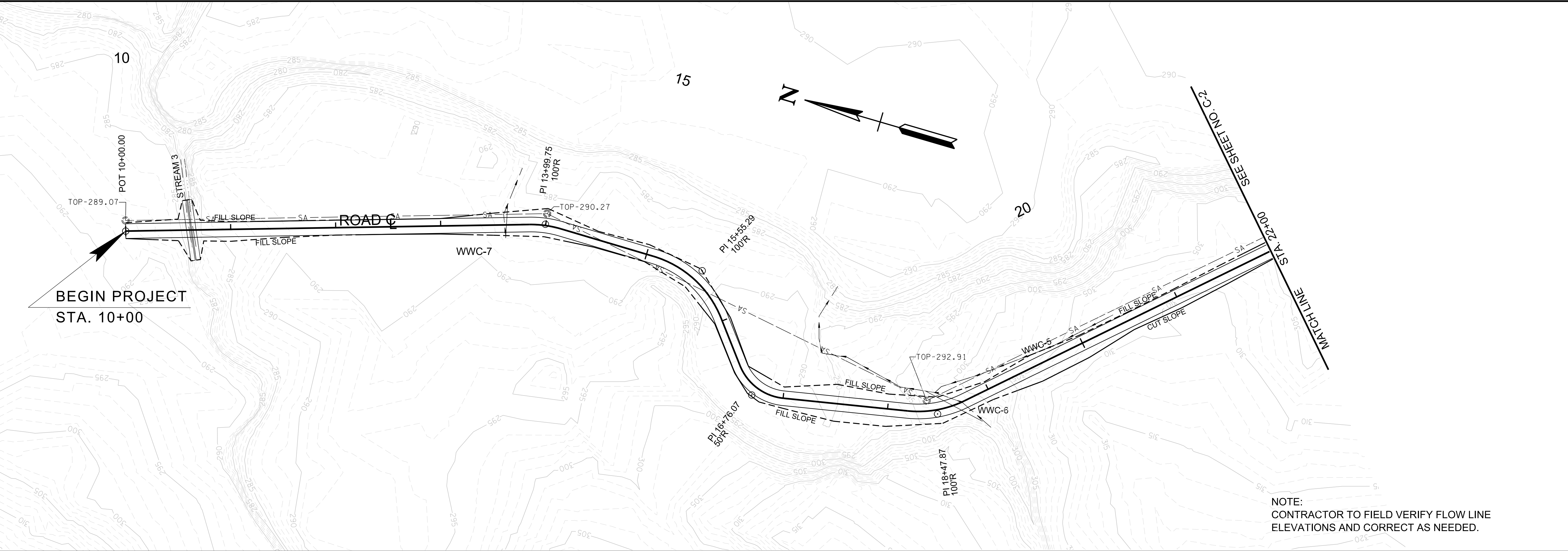
CONSTRUCTION RUNOFF MUST NOT ENTER STREAMS. PROVIDE DEPRESSED "SAG" OVERFLOW AREA ADJACENT TO THE ACCESS ROAD. SAGS MAY NOT BE LOWER THAN THE CROWN OF THE TEMPORARY CULVERT.



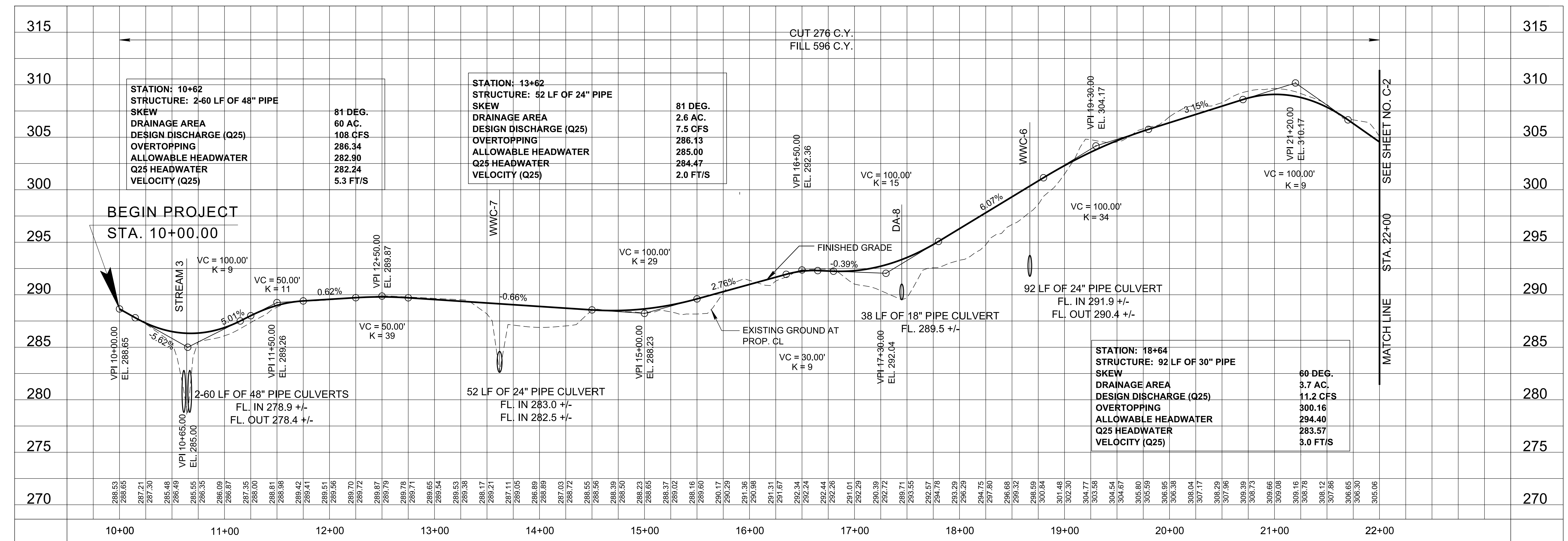
C = 1/2 DIAMETER OF PIPE OR 18" WHICHEVER IS GREATER
N = 1/2 DIAMETER OF PIPE OR 18" WHICHEVER IS GREATER



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NOTE:
CONTRACTOR TO FIELD VERIFY FLOW LINE
ELEVATIONS AND CORRECT AS NEEDED.



STATION: 10+62
STRUCTURE: 2-60 LF OF 48" PIPE
SKEW
DRAINAGE AREA
DESIGN DISCHARGE (Q25)
OVERTOPPING
ALLOWABLE HEADWATER
Q25 HEADWATER
VELOCITY (Q25)

81 DEG.
60 AC.
108 CFS
286.34
282.90
282.24
5.3 FT/S

STATION: 13+62
STRUCTURE: 52 LF OF 24" PIPE
SKEW
DRAINAGE AREA
DESIGN DISCHARGE (Q25)
OVERTOPPING
ALLOWABLE HEADWATER
Q25 HEADWATER
VELOCITY (Q25)

81 DEG.
2.6 AC.
7.5 CFS
286.13
285.00
284.47
2.0 FT/S

STATION: 18+64
STRUCTURE: 92 LF OF 30" PIPE
SKEW
DRAINAGE AREA
DESIGN DISCHARGE (Q25)
OVERTOPPING
ALLOWABLE HEADWATER
Q25 HEADWATER
VELOCITY (Q25)

60 DEG.
3.7 AC.
11.2 CFS
300.16
294.40
283.57
3.0 FT/S

NO.	REVISION	BY	DATE

PROJECT NO.: 81079-02
CAD FILE:
ENGR./ARCH.: AP
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P&P
B.O.P.
TO
STA. 22+00
DRAWING NO.
C-2
SHEET OF

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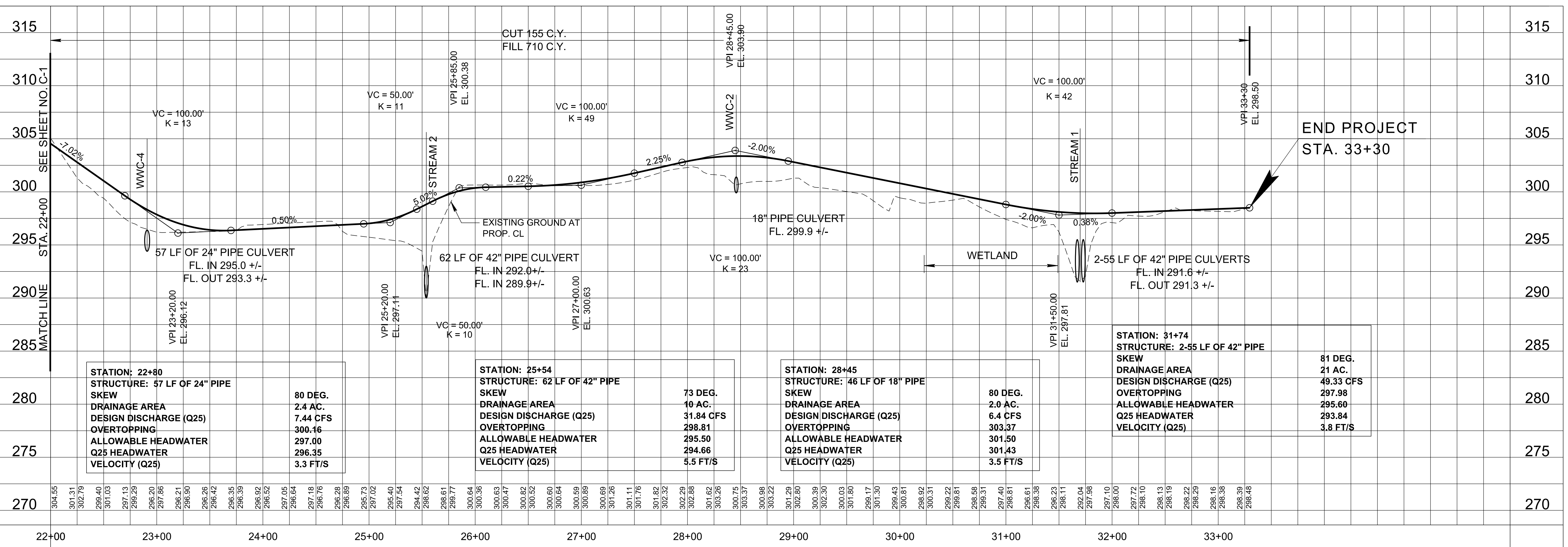
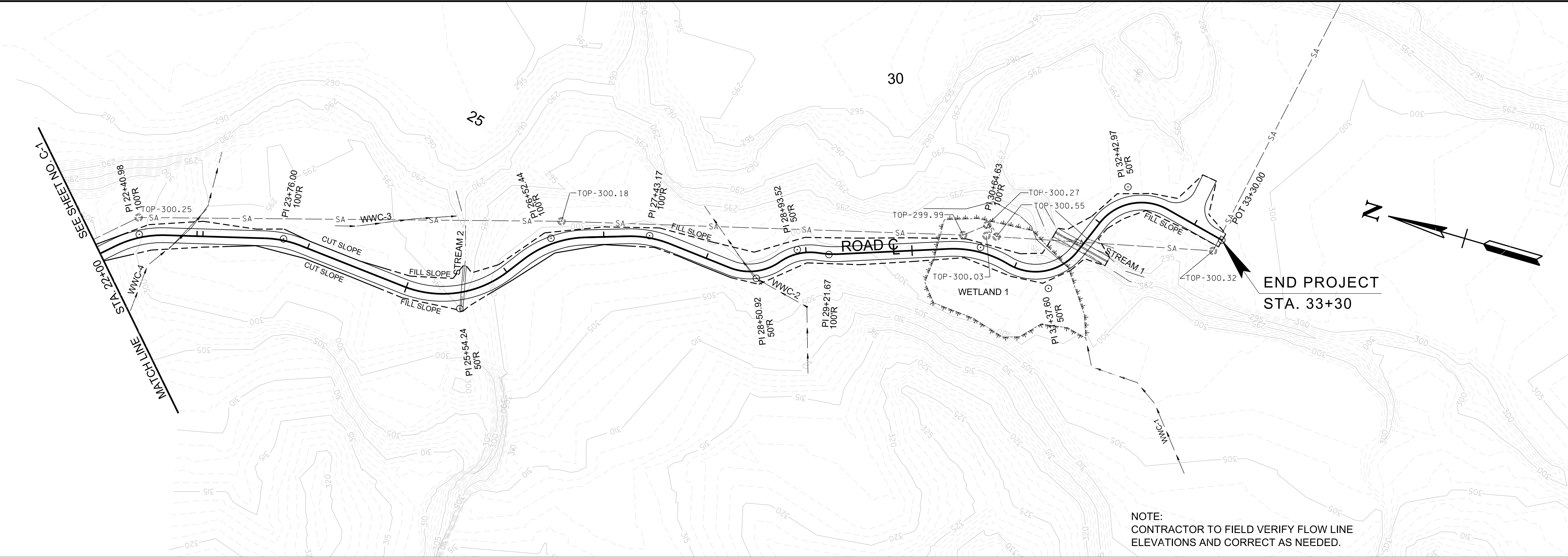
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SCOTT'S CREEK
MAINTENANCE ROAD EXTENSION
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	81079-02
CAD FILE:	
ENGR./ARCH.:	AP
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TO E.O.P.



STATION: 22+80	80 DEG.
STRUCTURE: 57 LF OF 24" PIPE	2.4 AC.
SKEW	7.44 CFS
DRAINAGE AREA	300.16
DESIGN DISCHARGE (Q25)	297.00
OVERTOPPING	296.35
ALLOWABLE HEADWATER	3.3 FT/S
Q25 HEADWATER	
VELOCITY (Q25)	

STATION: 25+54	73 DEG.
STRUCTURE: 62 LF OF 42" PIPE	10 AC.
SKEW	31.84 CFS
DRAINAGE AREA	298.81
DESIGN DISCHARGE (Q25)	295.50
OVERTOPPING	294.66
ALLOWABLE HEADWATER	5.5 FT/S
Q25 HEADWATER	
VELOCITY (Q25)	

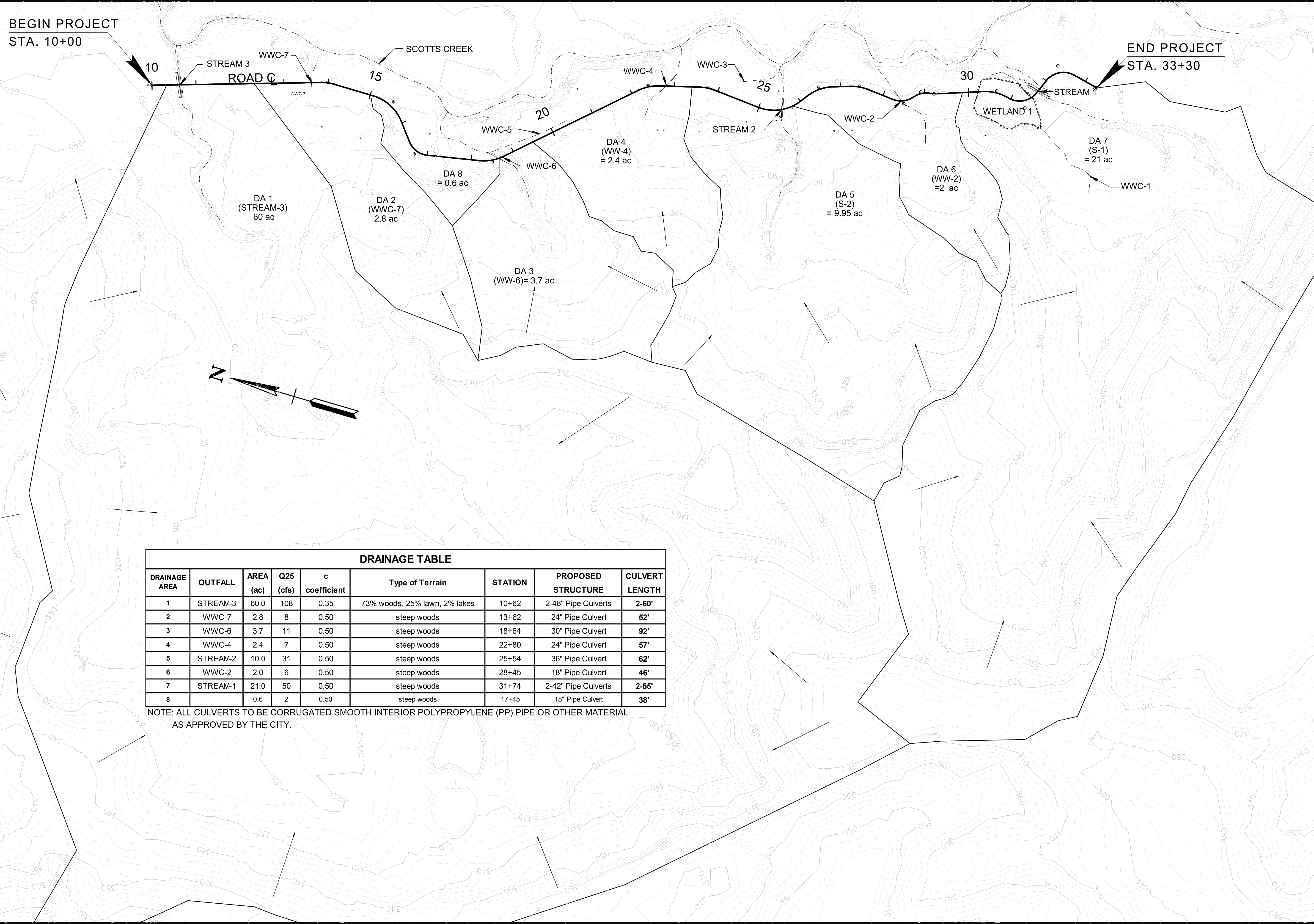
STATION: 28+45	80 DEG.
STRUCTURE: 46 LF OF 18" PIPE	21 AC.
SKEW	6.4 CFS
DRAINAGE AREA	303.37
DESIGN DISCHARGE (Q25)	301.50
OVERTOPPING	301.43
ALLOWABLE HEADWATER	3.5 FT/S
Q25 HEADWATER	
VELOCITY (Q25)	

STATION: 31+74	81 DEG.
STRUCTURE: 2-55 LF OF 42" PIPE	21 AC.
SKEW	49.33 CFS
DRAINAGE AREA	297.98
DESIGN DISCHARGE (Q25)	295.60
OVERTOPPING	293.84
ALLOWABLE HEADWATER	3.8 FT/S
Q25 HEADWATER	
VELOCITY (Q25)	

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END PROJECT
STA. 33+30



DRAINAGE TABLE								
DRAINAGE AREA	OUTFALL	AREA (ac)	Q25 (cfs)	c coefficient	Type of Terrain	STATION	PROPOSED STRUCTURE	CULVERT LENGTH
1	STREAM-3	60.0	108	0.35	73% woods, 25% lawn, 2% lakes	10+62	2-48" Pipe Culverts	2-60'
2	WWC-7	2.8	8	0.50	steep woods	13+62	24" Pipe Culvert	52'
3	WWC-6	3.7	11	0.50	steep woods	18+64	30" Pipe Culvert	92'
4	WWC-4	2.4	7	0.50	steep woods	22+80	24" Pipe Culvert	57'
5	STREAM-2	10.0	31	0.50	steep woods	25+54	36" Pipe Culvert	62'
6	WWC-2	2.0	6	0.50	steep woods	28+45	18" Pipe Culvert	46'
7	STREAM-1	21.0	50	0.50	steep woods	31+74	2-42" Pipe Culverts	2-55'
8		0.6	2	0.50	steep woods	17+45	18" Pipe Culvert	38'

NOTE: ALL CULVERTS TO BE CORRUGATED SMOOTH INTERIOR POLYPROPYLENE (PP) PIPE OR OTHER MATERIAL AS APPROVED BY THE CITY.



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CITY OF LAKELAND

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DRAINAGE
MAP

DRAWING NO. C-4
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STREAMS, WETLANDS & BUFFER ZONES

- ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., RIP-RAP PLACEMENT, CULVERT CONSTRUCTION, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS.

ENVIRONMENTAL

- EXCEPT AS OTHERWISE SPECIFIED, THERE ARE NO KNOWN SPECIAL ENVIRONMENTAL FACTORS PRESENT ON THIS PROJECT THAT INDICATE A NEED FOR SEASONAL LIMITATIONS ON THE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OPERATIONS OR ON THE TOTAL AREA OF EXPOSED SOIL.

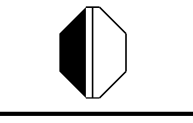
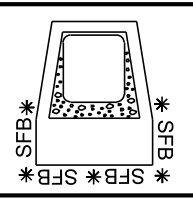
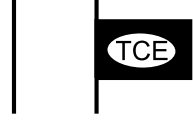
SEDIMENT CONTROL

- EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.
- TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REINSTALLED AT THE END OF THE WORKDAY OR BEFORE/DURING A PRECIPITATION EVENT.
- THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFFSITE MIGRATION OR DEPOSIT OF SEDIMENT OFF THE PROJECT LIMITS (E.G. R.O.W., EASEMENTS, ETC.), INTO WATERS OF THE STATE/U.S., OR ONTO ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFFSITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE NEGOTIATED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
- OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION EXIT (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES. CONSTRUCTION EXIT LOCATIONS TO BE INSTALLED PER CITY OF LAKE LAND STD. DWG. AND LOCATED AS DIRECTED BY THE ENGINEER.
- THE DEWATERING OF WORK AREAS, TRENCHES, FOUNDATIONS, EXCAVATIONS, ETC. THAT HAVE COLLECTED STORMWATER, WATER FROM VEHICLE WASH AREAS, OR GROUNDWATER SHALL BE EITHER HELD IN SETTLING BASINS OR TREATED BY FILTRATION AND/OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S GUIDELINES AND FULLY DESCRIBED IN THE EPSC PLANS. WATER DISCHARGED SHALL NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITHIN THE RECEIVING NATURAL RESOURCE. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL- VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. DISCHARGES FROM BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. DISCHARGES MUST NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITH THE RECEIVING STREAM.

NATURAL RESOURCES

- SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT NATURAL RESOURCES AND WATER QUALITY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG NATURAL RESOURCES IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS, WETLANDS OR OTHER NATURAL FEATURES IN ACCORDANCE WITH TDEC STANDARDS. EPSC MEASURES SHALL BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
- NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.
- INSTREAM EPSC DEVICES REQUIRE THE TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION REVIEW AND MUST BE PROCESSED BY THE PERMITS SECTION TO OBTAIN WATER QUALITY PERMITS.
- THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS AND EPHEMERAL, INTERMITTENT, AND PERENNIAL STREAMS, IS NOT ALLOWED.
- HEAVY EQUIPMENT WORKING IN WETLANDS WITH PERMITTED TEMPORARY IMPACTS SHALL BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE AND COMPACTION UNLESS SPECIFICALLY ADDRESSED IN THE CONSTRUCTION PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT SHALL BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED. ALL AFFECTED AREAS SHOULD BE RETURNED TO PRE-EXISTING CONDITIONS.
- WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION PLANS AND PERMITS.
- THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS PRIOR TO ANY CONSTRUCTION AND MAINTENANCE ACTIVITIES TO ENSURE THAT ENVIRONMENTAL FEATURES (E.G., STREAMS, WETLANDS, SPRINGS, ETC.) ARE NOT IMPACTED BEYOND PERMITTED LOCATIONS. IF THE CONTRACTOR OR TDOT INSPECTOR IS UNSURE OF THE IDENTITY OF AN ENVIRONMENTAL FEATURE, THE INSPECTOR SHALL CONTACT THE CITY OF LAKE LAND RESPONSIBLE PARTY IMMEDIATELY.

OUTFALL INFORMATION						
OUTFALL LABEL	STATION	OFFSET (FT.)	AVG. SLOPE	DRAINAGE AREA (AC)		RECEIVING NATURAL RESOURCE
				STAGE I	STAGE II	
1	13+62	LT	3%	2.8	2.8	SCOTTS CREEK
2	17+30	LT	7%	0.6	0.6	
3	18+20	LT	4%	3.7	3.7	
4	23+00	LT	5%	2.4	2.4	
5	28+00	LT	7%	2.0	2.0	

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
* SOCK 24" * SOCK 24" *	24 INCH FILTER SOCK	EC-STR-8
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
— IN — DIV —	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	SEDIMENT FILTER BAG	EC-STR-2
	TEMPORARY CONSTRUCTION EXIT	EC-STR-25

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SCOTT'S CREEK
MAINTENANCE ROAD EXTENSION
CITY OF LAKE LAND

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SCOTT'S CREEK
MAINTENANCE ROAD EXTENSION
CITY OF LAKELAND

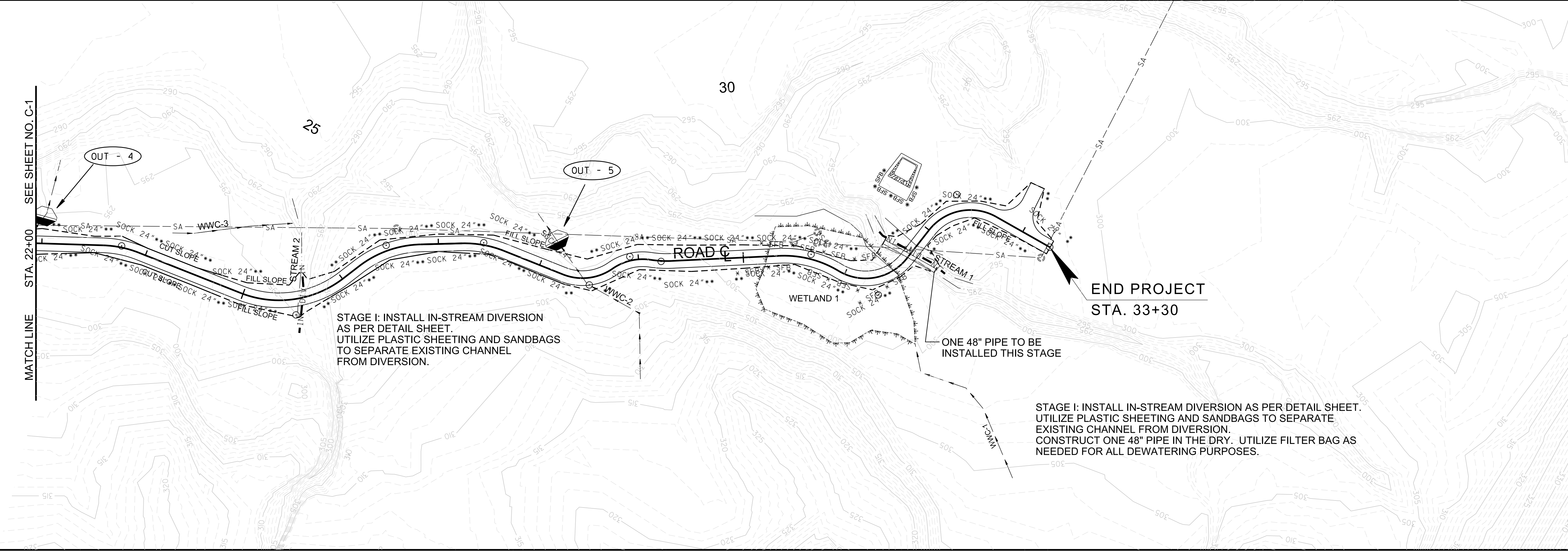
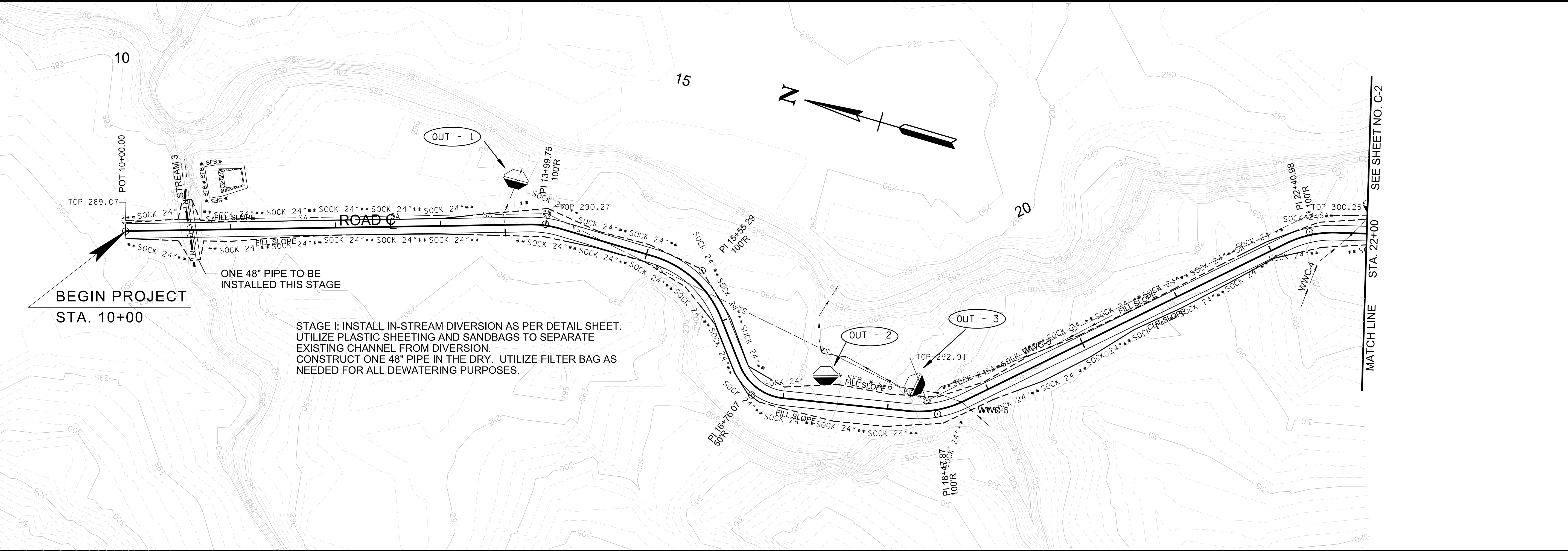
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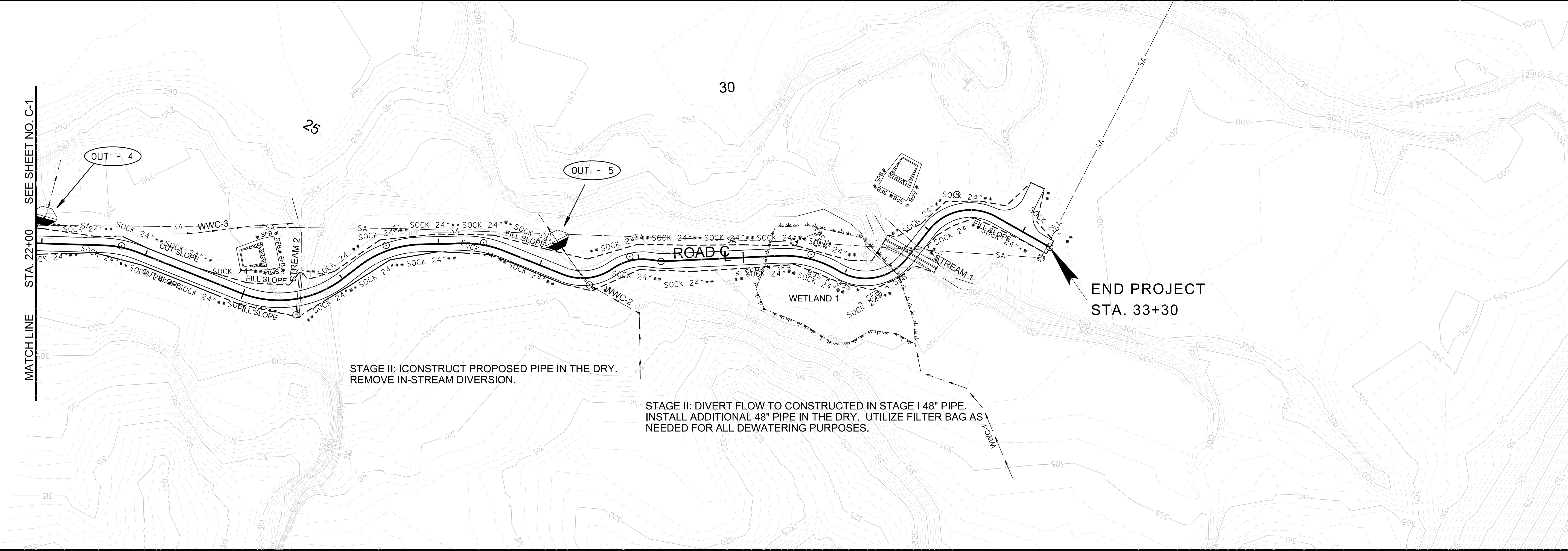
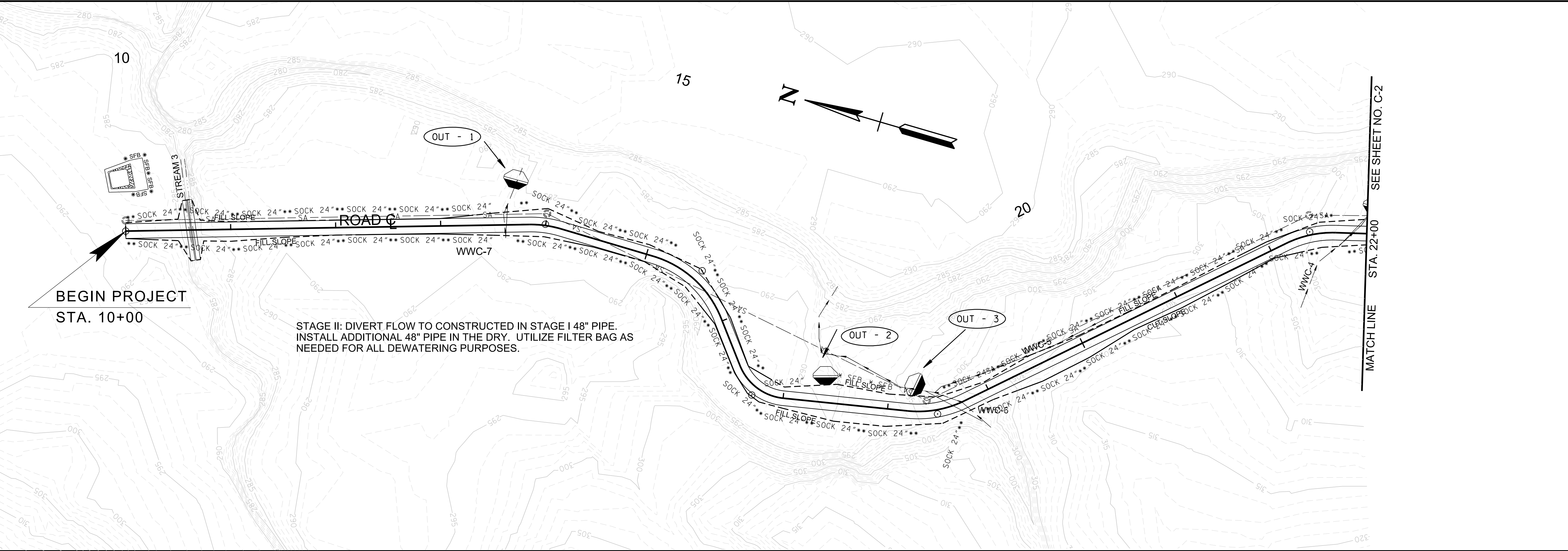
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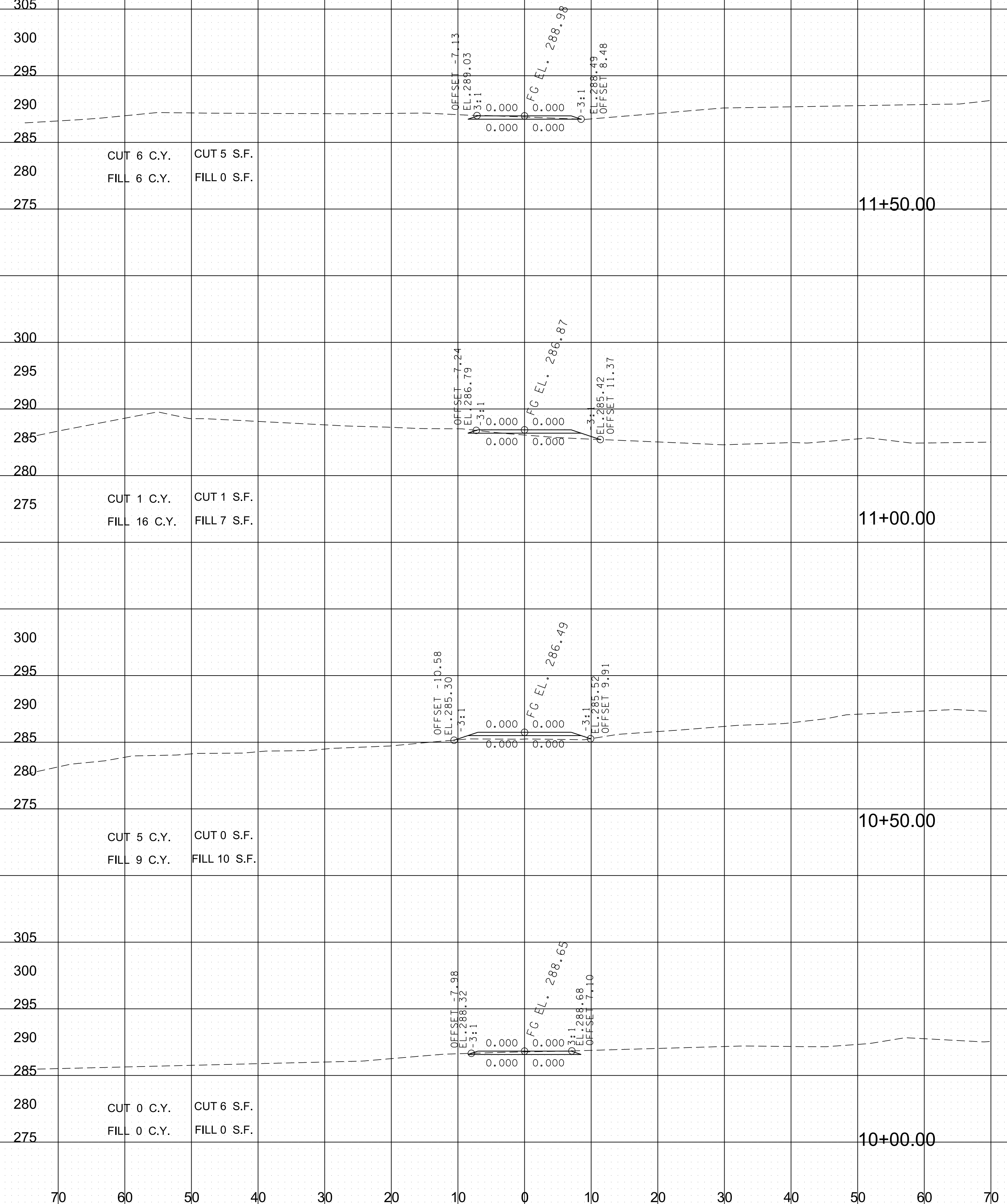


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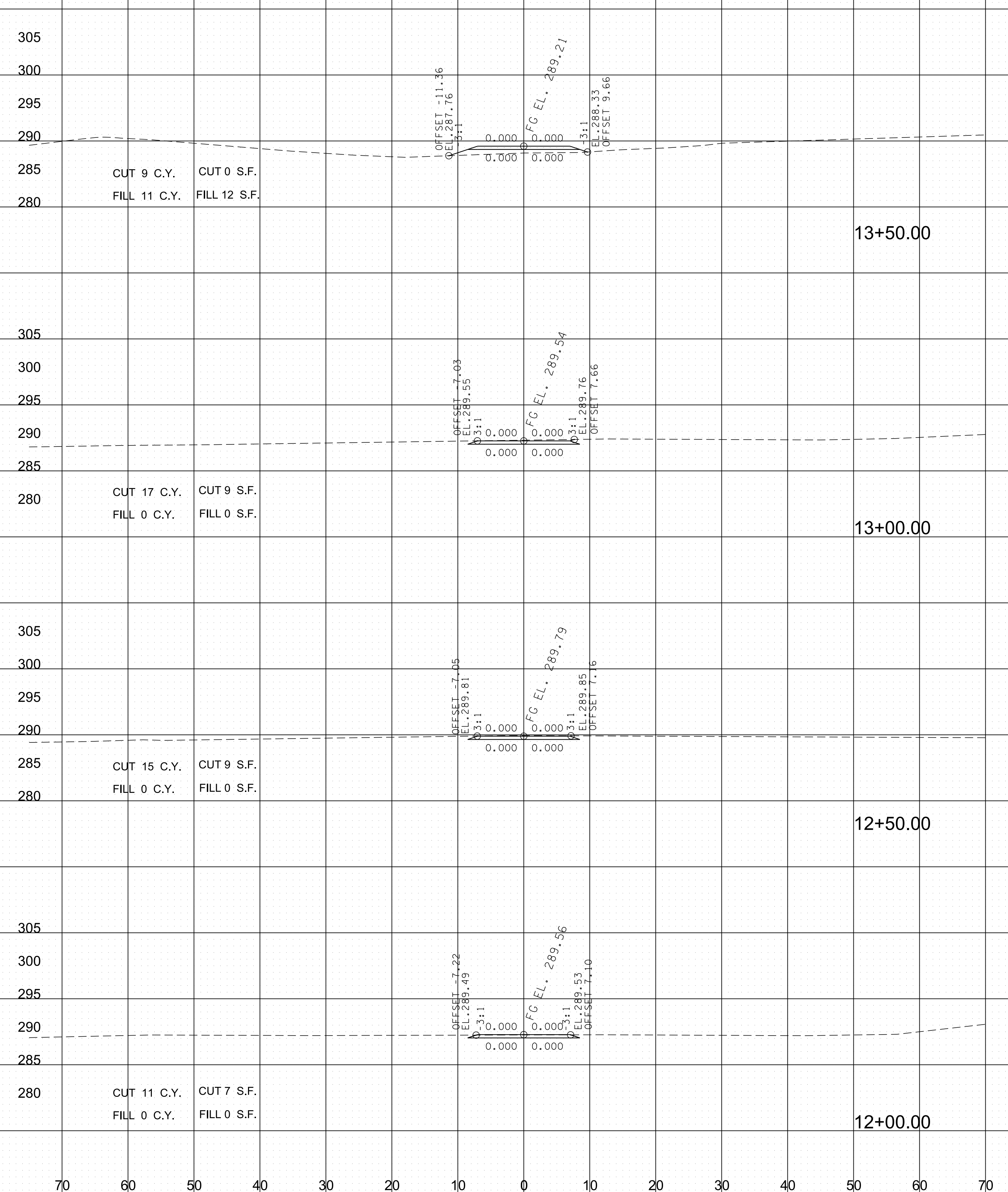
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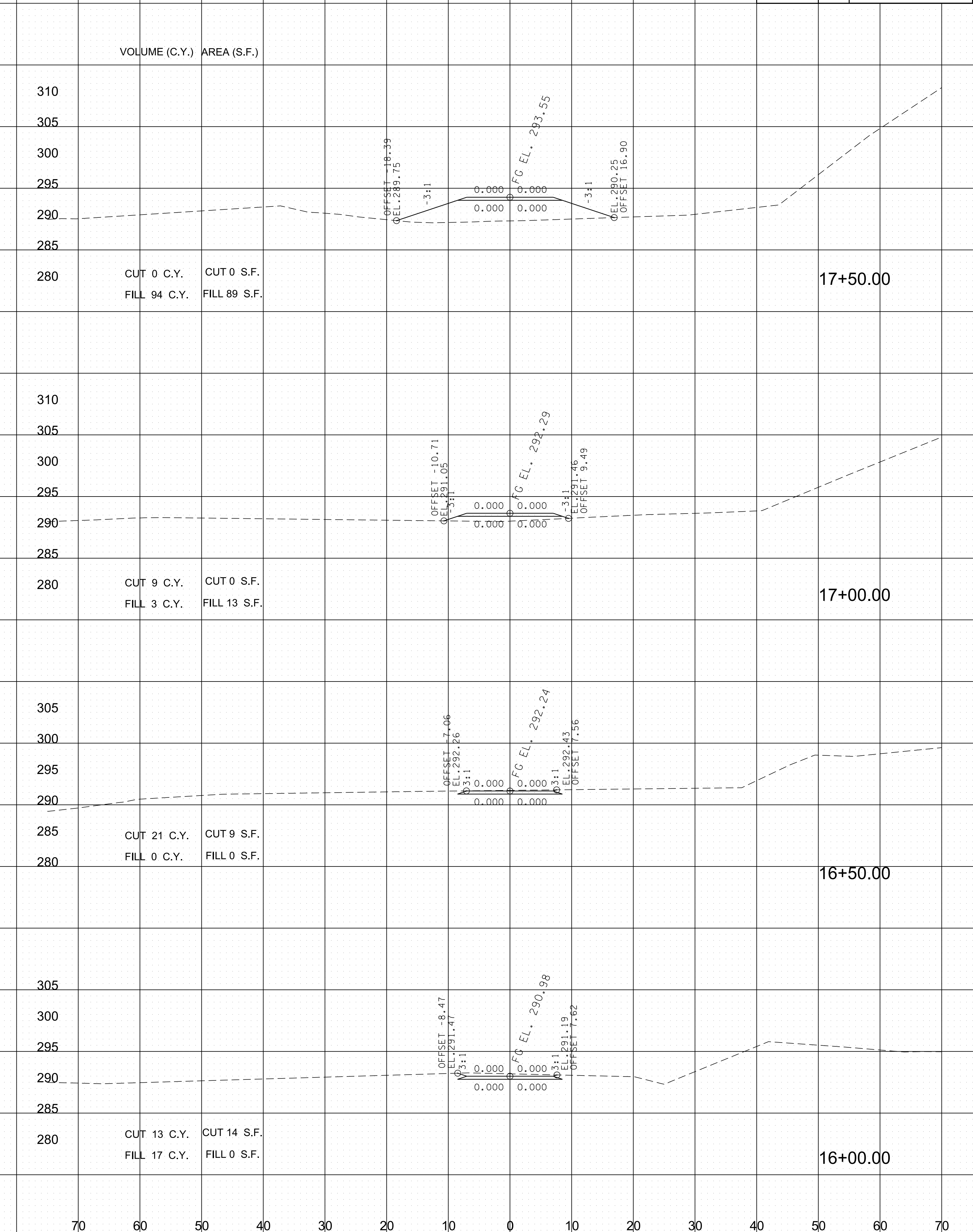
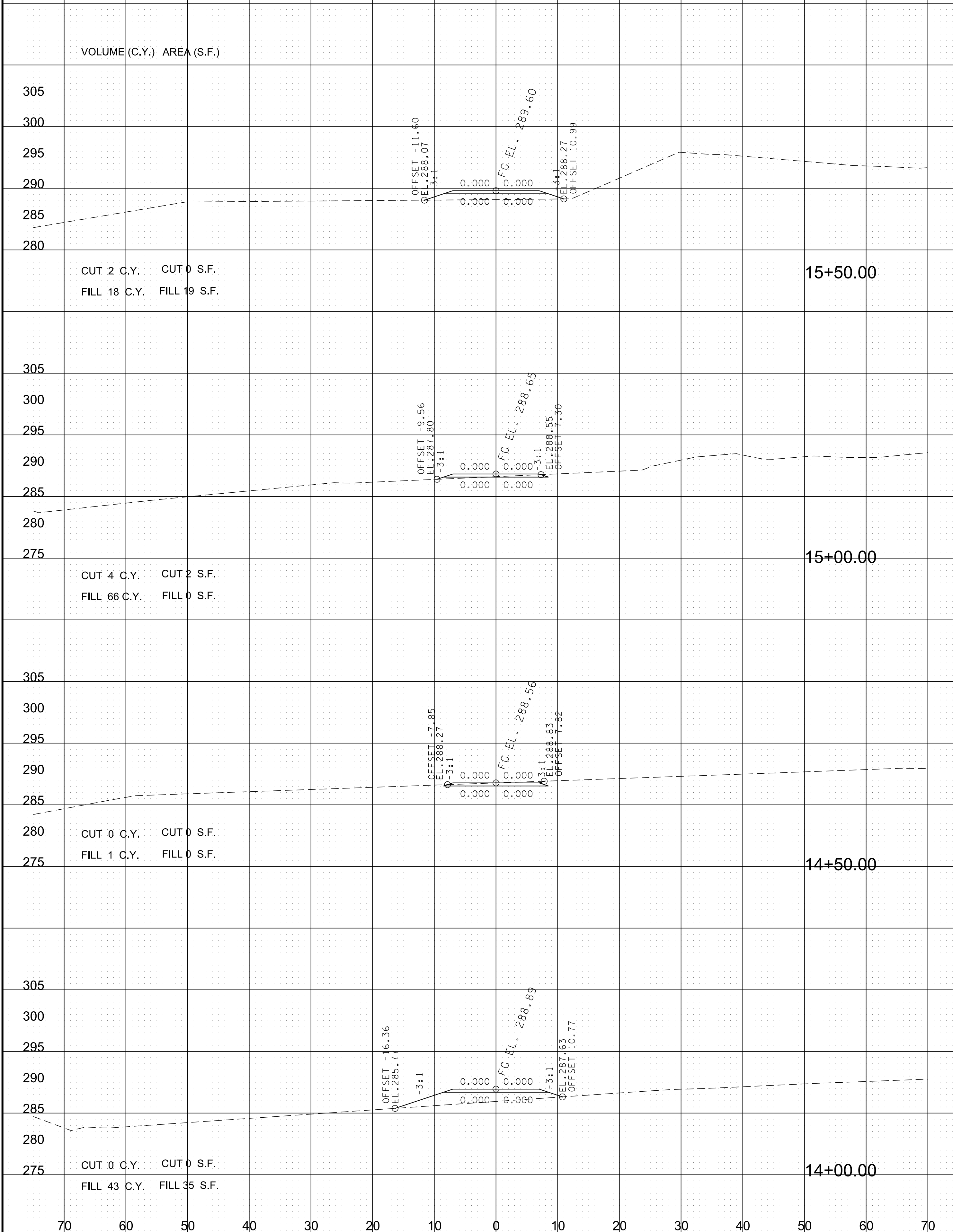
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VOLUME (C.Y.) AREA (S.F.)



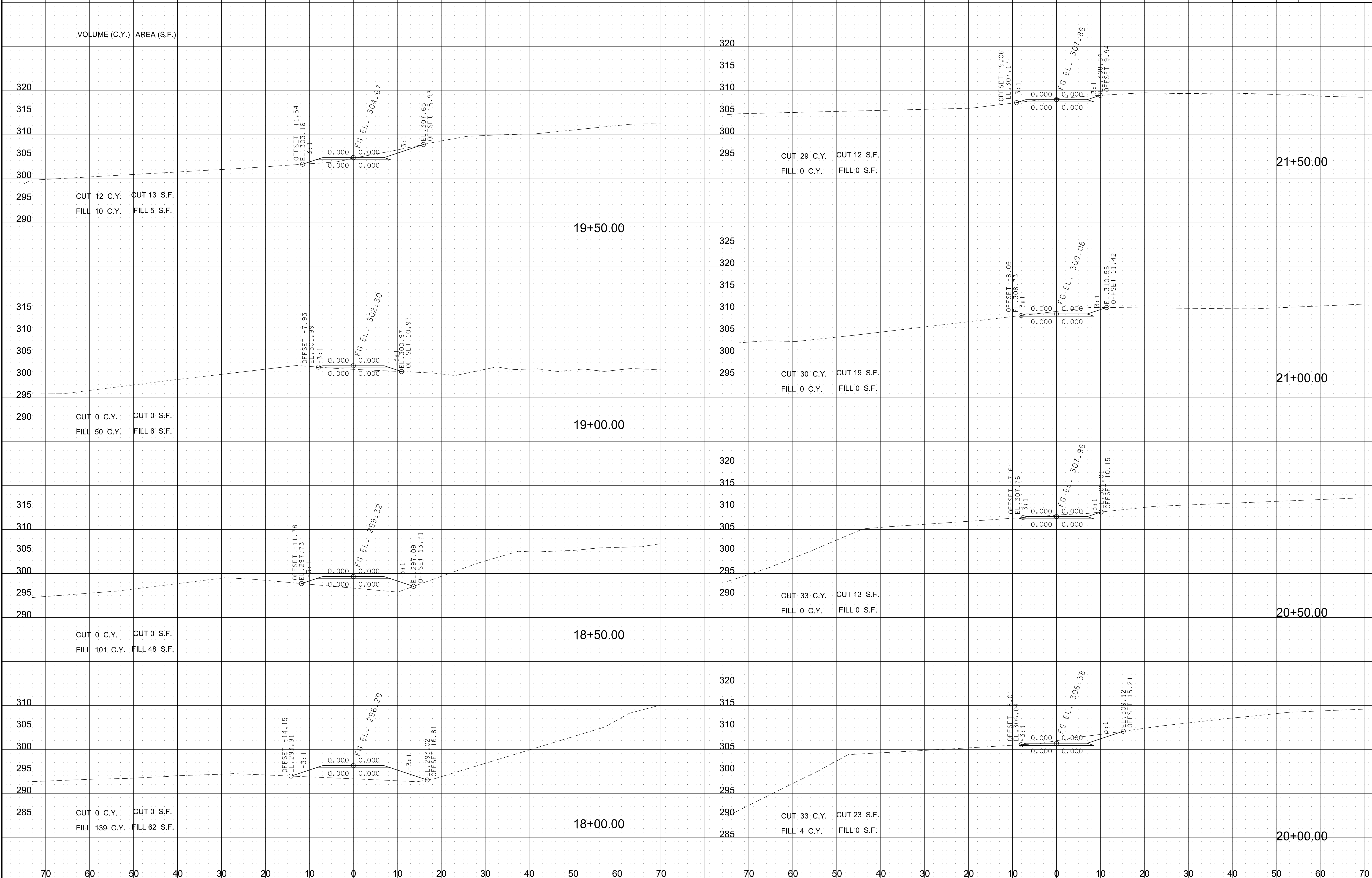
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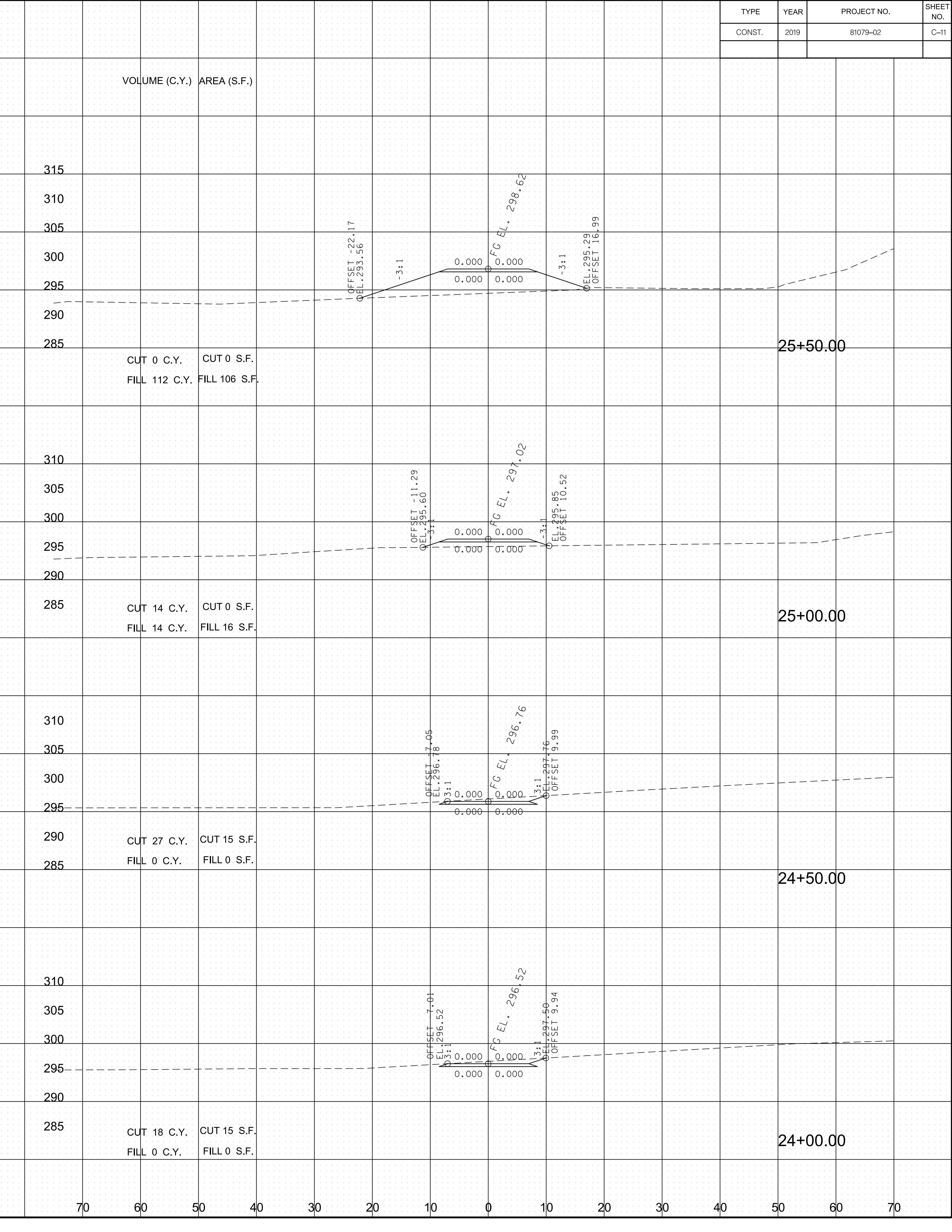
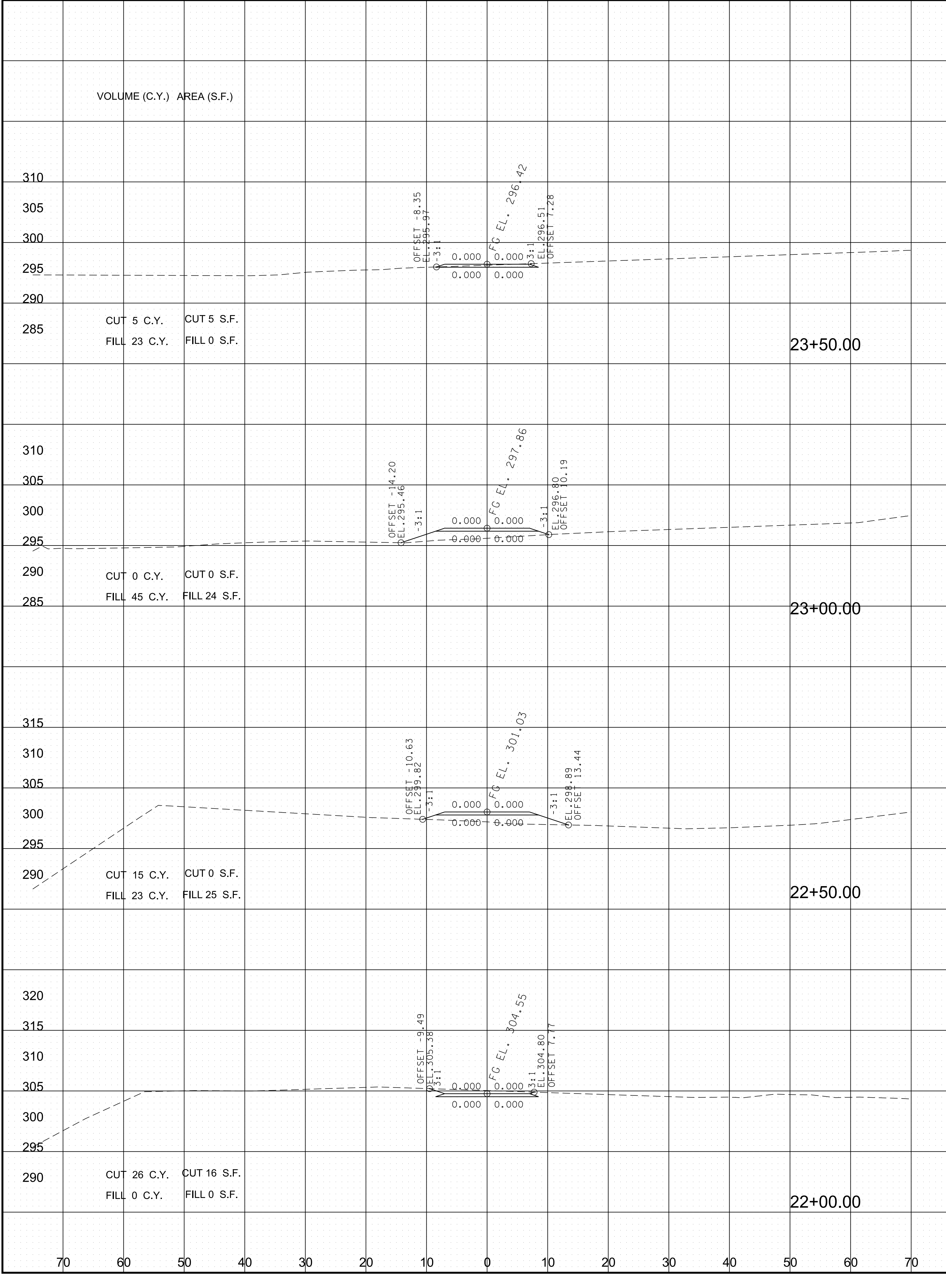


VOLUME (C.Y.) AREA (S.F.)

VOLUME (C.Y.) AREA (S.F.)

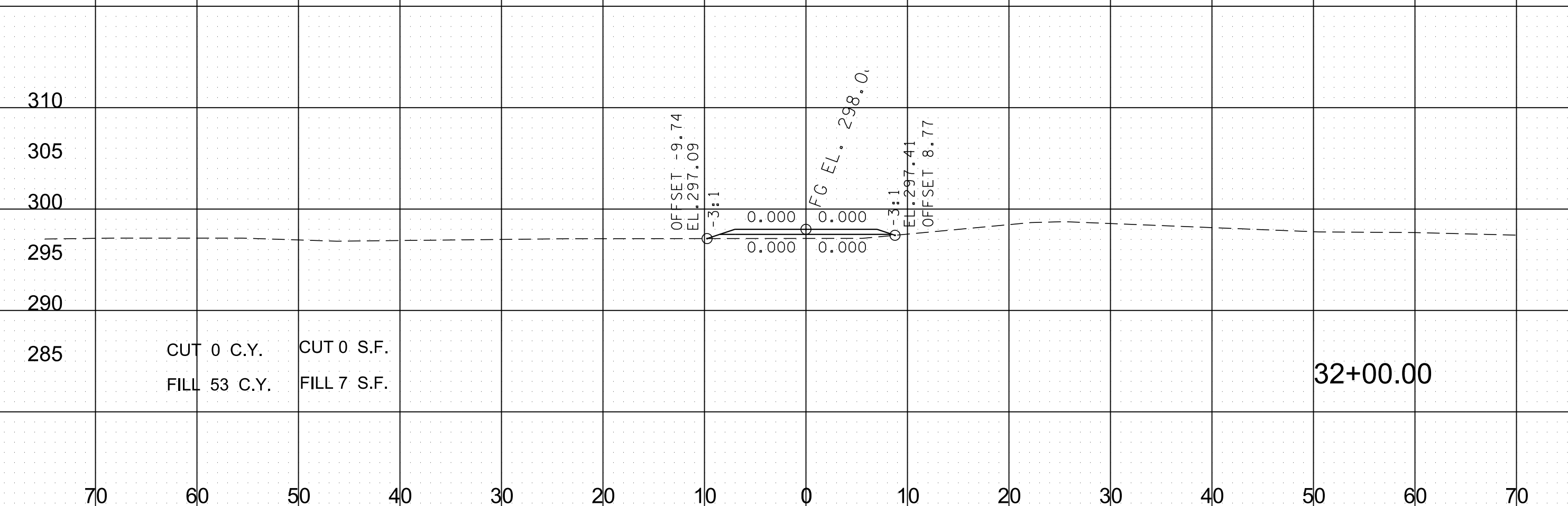
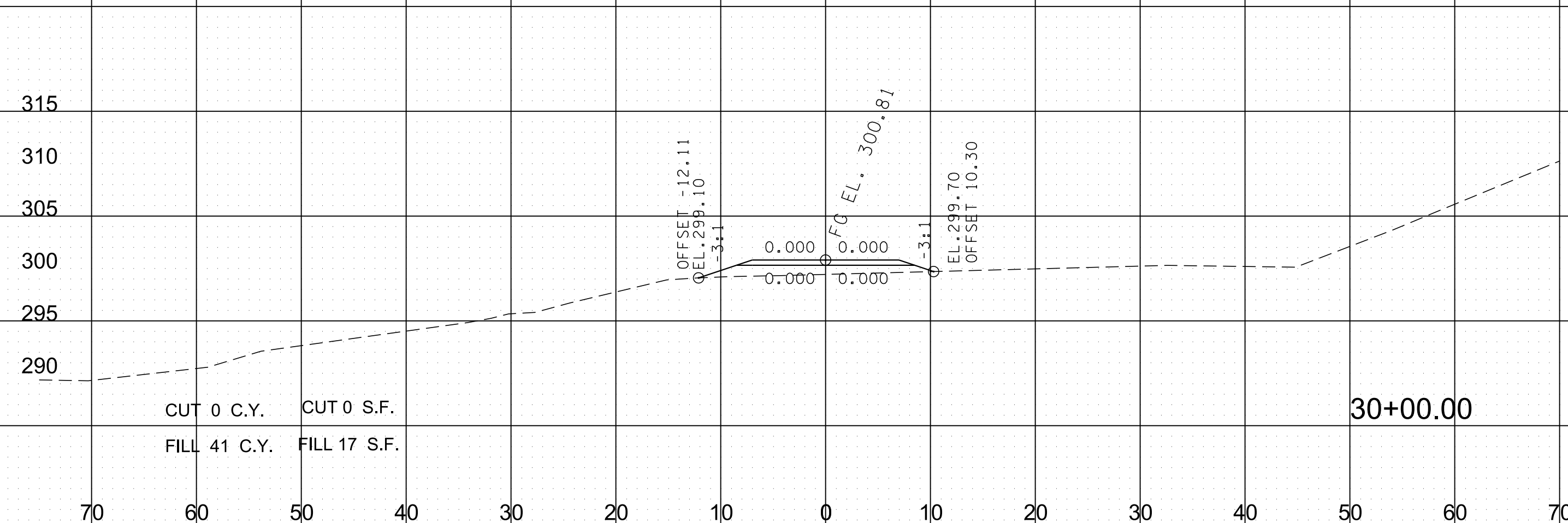
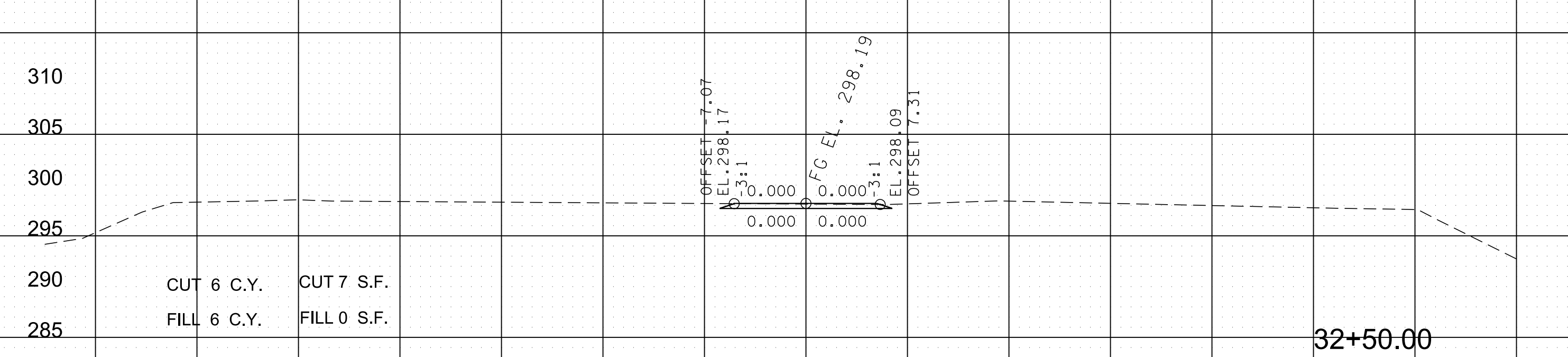
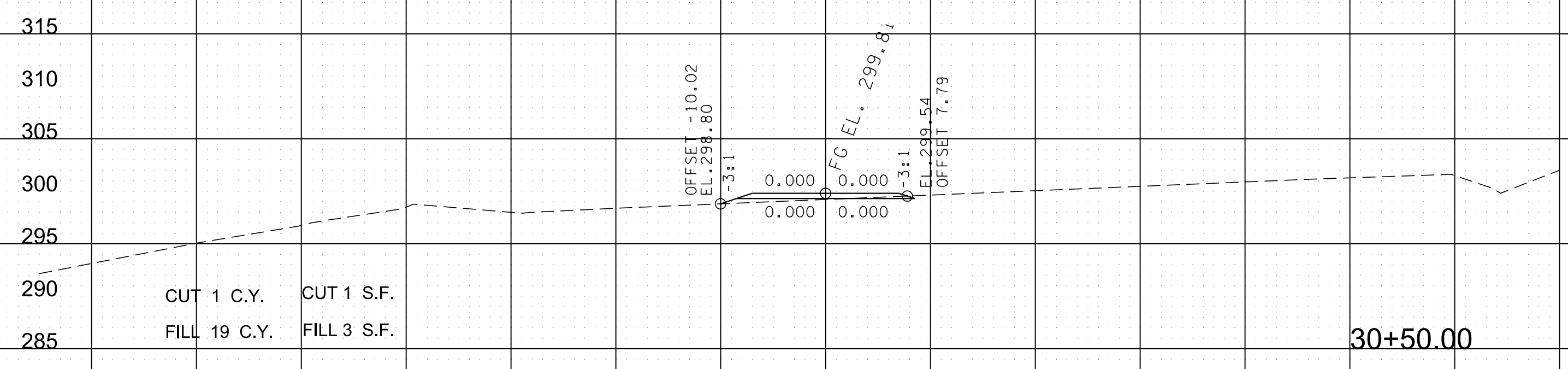
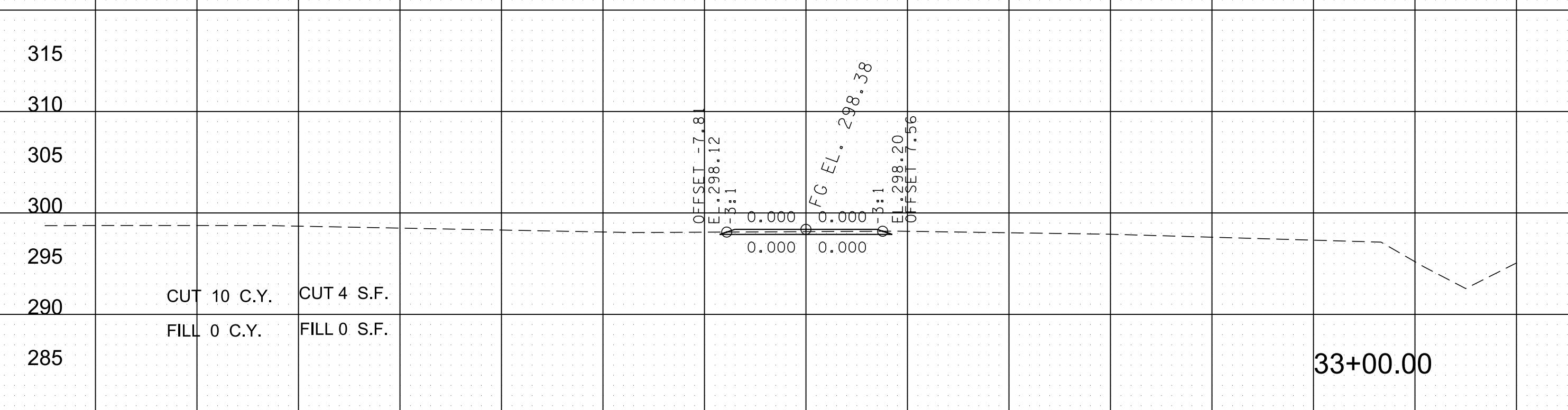
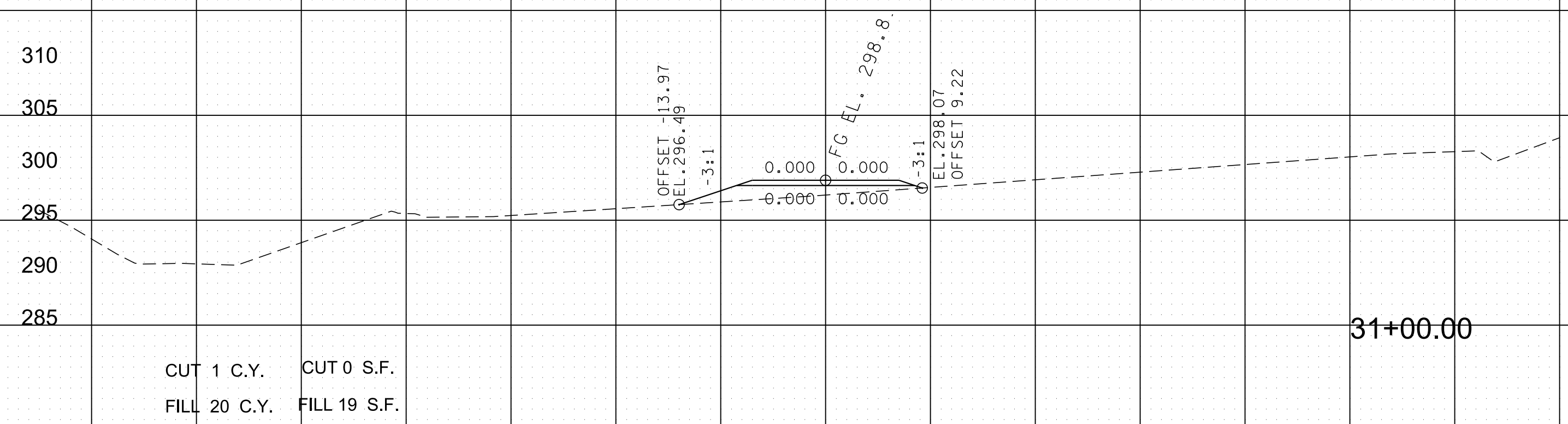
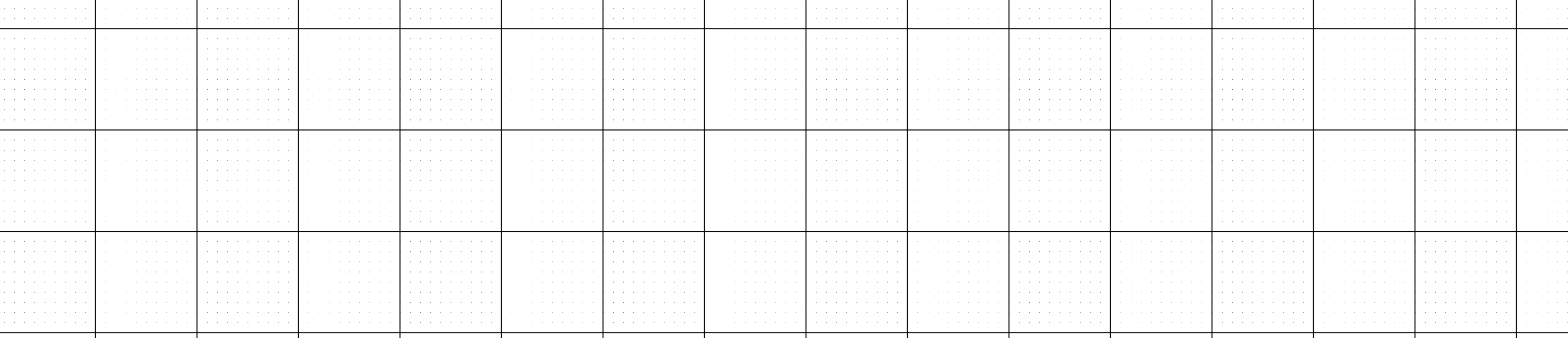
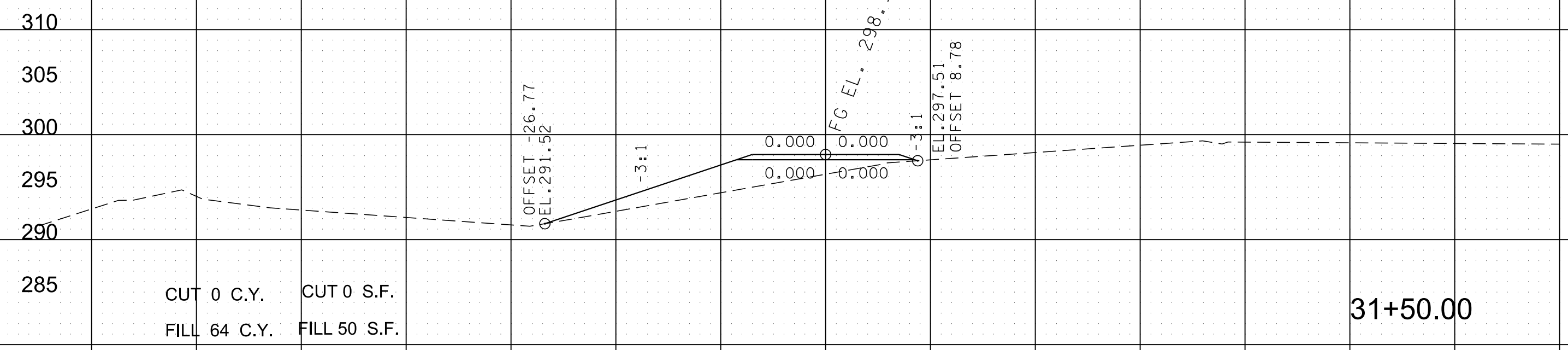


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VOLUME (C.Y.) AREA (S.F.)

VOLUME (C.Y.) AREA (S.F.)



CUT 0 C.Y. CUT 0 S.F.
FILL 64 C.Y. FILL 50 S.F.

CUT 10 C.Y. CUT 4 S.F.
FILL 0 C.Y. FILL 0 S.F.

CUT 1 C.Y. CUT 0 S.F.
FILL 20 C.Y. FILL 19 S.F.

CUT 6 C.Y. CUT 7 S.F.
FILL 6 C.Y. FILL 0 S.F.

CUT 1 C.Y. CUT 1 S.F.
FILL 19 C.Y. FILL 3 S.F.

CUT 0 C.Y. CUT 0 S.F.
FILL 53 C.Y. FILL 7 S.F.

CUT 0 C.Y. CUT 0 S.F.
FILL 41 C.Y. FILL 17 S.F.

CUT 0 C.Y. CUT 0 S.F.
FILL 53 C.Y. FILL 7 S.F.

VOLUME (C.Y.) AREA (S.F.)

VOLUME (C.Y.) AREA (S.F.)

