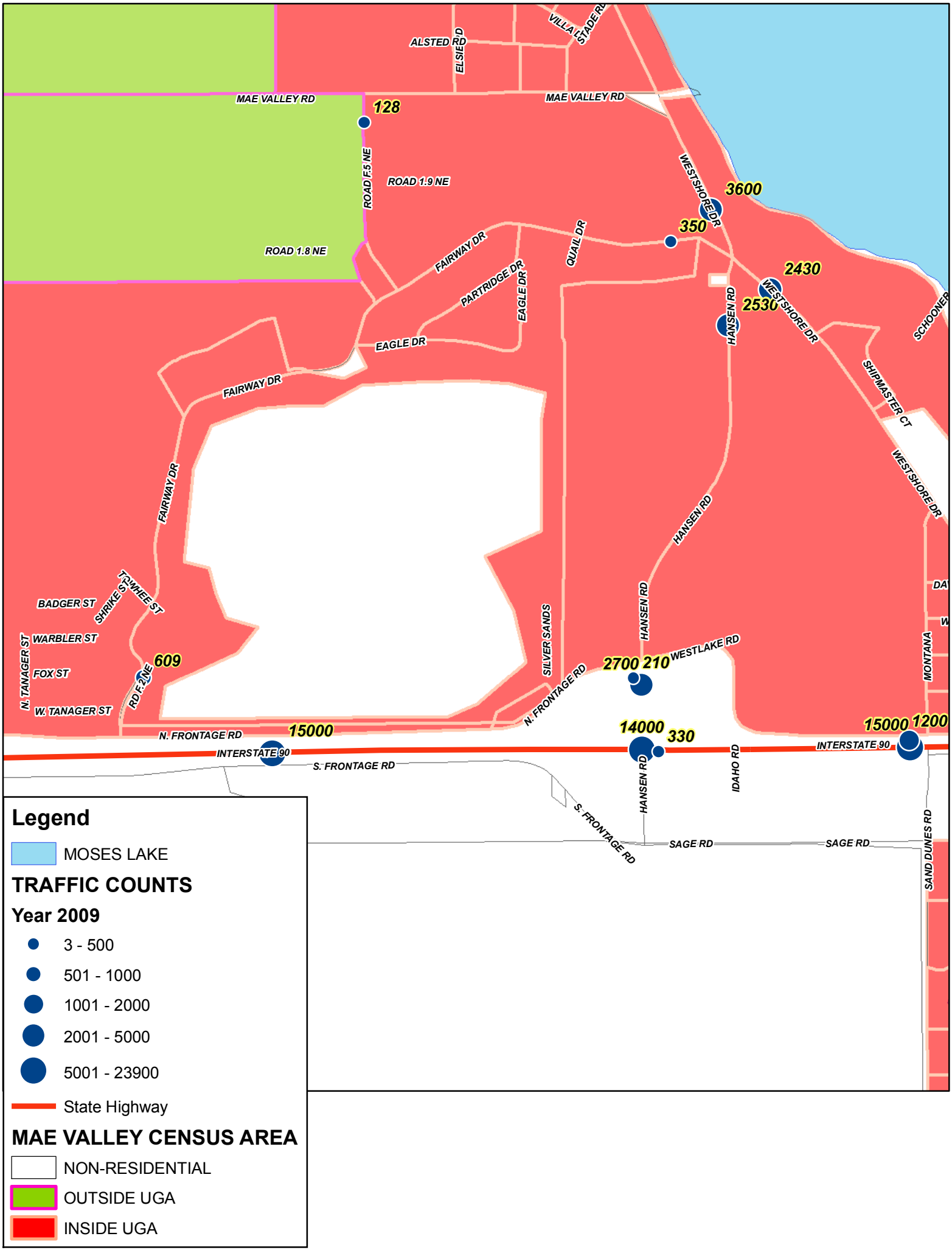
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QUAIL DR
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PARTRIDGE DR
EAGLE DR
EAGLE DR
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2530
WESTSHORE DR
HANSEN RD
SCHOONER
SHIPMASTER CT
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FAIRWAY DR
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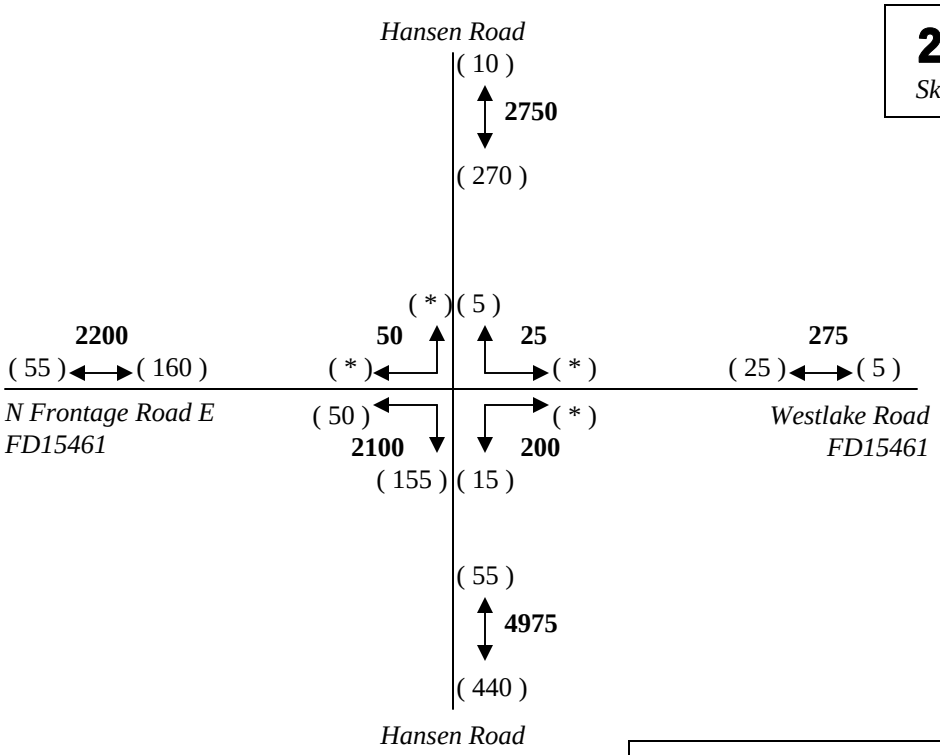
HANSEN RD
BADGER ST
SHRIKE ST
TAWHEE ST
WARBLER ST
N. TANAGER ST
FOX ST
W. TANAGER ST
RD F.2 NE
609
SILVER SANDS
2700
210
WESTLAKE RD
N. FRONTAGE RD
MONTANA
N. FRONTAGE RD
15000
14000
330
15000
1200
INTERSTATE 90
INTERSTATE 90
S. FRONTAGE RD
HANSEN RD
IDAHO RD
S. FRONTAGE RD
SAGE RD
SAGE RD
SAND DUNES RD
Legend
MOSES LAKE
TRAFFIC COUNTS
Year 2009
3 - 500
501 - 1000
1001 - 2000
2001 - 5000
5001 - 23900
State Highway
MAE VALLEY CENSUS AREA
NON-RESIDENTIAL
OUTSIDE UGA
INSIDE UGA

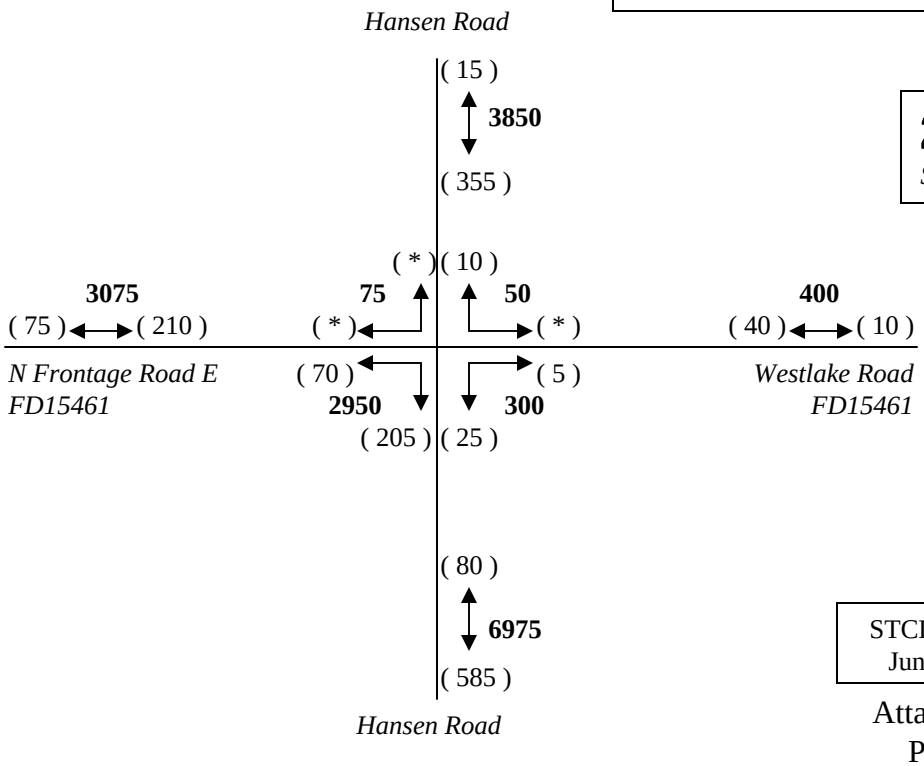
2011
Sketch 1



Hansen/Westlake/N. Frontage Roads

(xx) = Estimated DDHV
XX = Estimated AADT
* = *Very low volume that rounds to zero*

2031
Sketch 2



STCDO clv
June 2011

Washington State Department of Transportation

Memorandum

June 15, 2011

TO: David Kieninger
North Central Region
MS: DOT-NCR

FROM: David J. Bushnell, PE
PHONE: (360) 570-2416

SUBJECT: SR 90 MP 174.60 CS 1311
Hansen Road/N Frontage Road/Westlake Road Intersection
MT0184-01-0150-0400NT
Design Traffic Analysis

In response to George Stuart's April 5, 2011 e-mail request, design hour traffic volumes for the above-referenced section of highway have been estimated as follows:

- Sketch No. 1 shows the estimated 2011 AADT and DDHVs,
- Sketch No. 2 shows the estimated 2031 AADT and DDHVs.

The design hour truck percentage is:

- Hansen Road - 4%
- N. Frontage Road - 3%
- Westlake Road - 2%
  Note: There were no trucks on Westlake Road (east leg of intersection) during the entire eight-hour manual count period, so we estimated 2%, assuming more trucks/trailers during the summer season .

This analysis is based on counts conducted May 10-12, 2011 (Sp#11-006).

If we may be of further assistance, please call Dave Bushnell at the above number or Christie Vintilo at (360) 570-2417.

DJB:clv
Attachment

cc: all w/attachment

Akmal Siddiqui	HQ Design	MS: 47329
Dan Sarles (electronic copy)	North Central Region	MS: DOT-NCR
Jennene Ring (electronic copy)	North Central Region	MS: DOT-NCR

Twenty year Population estimate for Mae Valley

Basic Calculations:

Census Tracts are identified by the Census as being in the Moses Lake Urban Growth Boundary or in the City Limits with the 2010 Population and Housing Units data associated with each Tract. By using a 3% Annual Growth Factor which compounds to 180%, the Projected Population and Housing Units were established:

	1990 CENSUS	2010 CENSUS	2030 PROJECTED
City Limits Housing Units	4,635	8,365	15,097
AMOUNT OF INCREASE		180%	6,732
City Limits Population	11,235	20,366	36,918
AMOUNT OF INCREASE		181%	16,552
Total UGA Population		31,865	57,357
AMOUNT OF INCREASE		180%	25,492
UGA Population Outside the City Limits		11,499	20,439
AMOUNT OF INCREASE			8,940

Parcel Information shows the number of vacant and developable lots in the City Limits that can absorb a portion of the 16,552 Population Increase for 2030.

City Limits Housing Units(1)	8365
Actual Developed Residential Acres(2,4)	1684.17
Housing Units Per Acre	4.97
Population Per Housing Unit	2.43
Population Per Acre	12.09
Occupancy Rate(1)	90.85%
Effective Housing Units Per Acre	4.51
Undeveloped Residential Land (Acres) (2,4)	1182.74
Less Parks (5.0%)	59.14
Less Public (5.0%)	59.14
Less Roads/Row (18.45%)	218.22
Less Wetlands And Slope(5)	210.60
Net Undeveloped Land	635.65
Less 25% Market Safety Factor	158.91
Available Undeveloped Residential Land (Acres)	476.74
Infill Housing Units (4.97/Acre)	2,368
Infill City Population (12.09/Acre)	5,764

The Infill Population of 5,764 is subtracted from the Projected Increase in the City Limits of 16,552 leaving 10,529 which is added to the number of those people outside the City Limits and within the Urban Growth Boundary (8,940). There will be a Population of 19,469 which will distribute over the UGA

Addition to UGA Population	10,529
UGA Population outside City Limits(1)	8,940
Net UGA Population Increase	19,469

The area of Residential property outside the City Limits and In the UGA is reduced by the area of Wetlands and High Slopes and an average Population density will be 8.17 when distributed over the entire Residential Area. Since the net area of the three neighborhoods is known, the additional populations can be calculated

Acres UGA Population Increase At 12.09/Acre	1,610.34
Plus Roads/Row (18.45%)	297.11
Plus 25% MSF	476.86
Plus Parks (5%)	119.22
Plus Public (5%)	119.22
Additional Gross UGA Acres Needed	2,622.74
Average UGA Population Increase Per Gross Acre	7.42
Gross UGA Acres Available(2,3)	2,804.66
Less Wetlands And Slope(5,7)	598.49
Net UGA Acres Available	2,206.17
Deficit Acres	-416.57
Mae Valley UGA - 1,480 Gross Acres(2) At 7.42/Acre	10,986
Potato Hill UGA - 164 Gross Acres(2)	1,217
Cascade Valley UGA - 520 Gross Acres(2)	3,860
Remainder	3,405

Current Study Area: West of Moses Lake to Road D N.E.

As Moses Lake continues to grow over the next 20 years, the majority of this expansion will be to the west. The reasons for this are primarily due to the large Industrial base that has grown in the East and to the North with several new facilities being built (SGL/BMW and Guardian Fiberglass) and the major expansion of REC. There are also large portions of the Mae Valley area that are outside of the Irrigation Project and that have Domestic and Irrigation Water Rights that would become available with development. Some of this development has already taken place with the construction of the Moses Pointe water and sewer systems with more than 1,000 housing units when it reaches full build out. In addition, there are preliminary plans for over 1,000 lots in the adjacent 2 miles of UGA. Along the north side of the freeway, there are plans for more than 1,000 lots of which more than 100 have already been sub-divided in the Sun Terrace Neighborhood.

Current Study Area Population Outside of UGA[1]	1,135
Current Study Area Population Outside of UGA in 2030 (180%)	2,043
Current Population East of Road D N.E. and West of Moses Lake[1]	2,885
Mae Valley UGA Population Increase - 1,480 ACRES	10,986
Projected City Population Increase West Of Moses Lake for 130.28 Acres[2]	1,575
Total Projected Population East of Road D N.E. and West of Moses Lake	17,489
Percent Increase	606%
Current AADT East Bound Prichard Road On Ramp at Interstate 90[9]	3,300
Projected AADT East Bound Prichard Road On Ramp at Interstate 90	20,000

This expansion will have a major impact on the roads and highways in the area, with the traffic on Interstate 90 more than doubling. The City Center, Shopping and Schools will remain in place and with only one place to cross Moses Lake, the ability of the current system to accommodate this expansion will fail. The current 4 lane crossing of Moses Lake is over 1,700 feet long and is made up of 1,500 feet of fill and two 240 foot bridges. In order to add lanes in this location, there would need to be a major construction project with the only option being to bridge the entire 1,700 feet.

In another Twenty Years, the population of the area will again almost double, with up to 40,000 AADT for the same location and total more than 60,000 on the bridges over Moses Lake.

The only current option to crossing Moses Lake on a State Highway is to drive more than 50 miles north through Ephrata or south through Warden and this bottle neck is only going to get worse as the population increases. Serious consideration needs to be given to another lake crossing instead of additional lanes at this location.

Method of Data Extraction:

1. 2010 Census Data was made available from U.S. Census in February 2011 and provides population and housing information at the Tract level. This information was extracted into several files that give information within the City Limits of Moses Lake, within the Urban Growth Boundary for the City, those portions of the Urban Growth Boundary that are outside the City Limits and those Tracts that are west of the Urban Growth Boundary in Mae Valley. There are two 18 hole Golf Courses in the Mae Valley area and the extents of those Courses were removed from the Census information, areas of the tracts were recalculated in acres using ArcMap and the files were updated. By spatially joining the Census information with Zoning from the City and County, those Tracts that are Non-residential were removed from the files and only those tracts that are going to be used for Residential Development are included in the acreage and population calculations. Tabular 1990 Census Data was acquired from various sources.
2. Parcel Data is composed of polygons that have been drawn and verified over the past 10 years. These include information on the value of improvements on the parcel and the area of the parcels excludes Dedicated Right-of-Way. There are several groups of parcels that are removed from the data including: Deeded Right-of-Way, Publicly Owned parcels, parcels with Houses of Worship and “sliver lots” - small parcels that are actually part of the adjacent lot. By joining this data with the Land Use Files those parcels with Residential designations were used in this study and separated into those with improvements (housing units) and those without (vacant).
3. Grant County Land Use information was reduced by those areas that are Non-residential and the planned Housing Unit densities were assigned to the polygons in the files based on the current Grant County Comprehensive Plan. This information was spatially joined to the Census Tract and Parcel Data polygons to give an indication of the ultimate number of Housing Units for each polygon in those files.
4. City of Moses Lake Land Use Information was also reduced by those areas that are Non-residential in nature and the planned housing Unit Densities were assigned to the polygons in the Parcel Data. This information was also spatially joined to the Census Tract and Parcel Data polygons to give an indication of the ultimate number of Housing Units for each polygon in those files.
5. National Wetlands Inventory information was expanded by 65 feet to show the buffer that is required between the Wetland and any development and separated into those areas that are within the City Limits, within the Urban Growth Boundary, in the Urban Growth Boundary but outside the City Limits and the area west of the City Limits in the Mae Valley area.
6. Local Wetland delineation is not buffered and reduces the size of existing lots, particularly those that are more than one acre. These areas are only within the City Limits.
7. Soil Data Viewer allows extraction of areas of Geologically Hazardous areas including those classified as having High Slopes, High likelihood of Wind Erosion and those areas that are subject to Frequent Flooding. Each of these classes were then separated into those areas that are within the City Limits, within the Urban Growth Boundary, in the Urban Growth Boundary but outside the City Limits and the area west of the City Limits in the Mae Valley area.

Spatial Datum:

Projected Coordinate System: NAD_1983_StatePlane_Washington_South_FIPS_4602_Feet
Projection: Lambert_Conformal_Conic
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False_Northing: 0.00000000
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Standard_Parallel_2: 47.33333333
Latitude_Of_Origin: 45.33333333
Linear Unit: Foot_US (0.304801)

Geographic Coordinate System: GCS_North_American_1983
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Spheroid: GRS_1980
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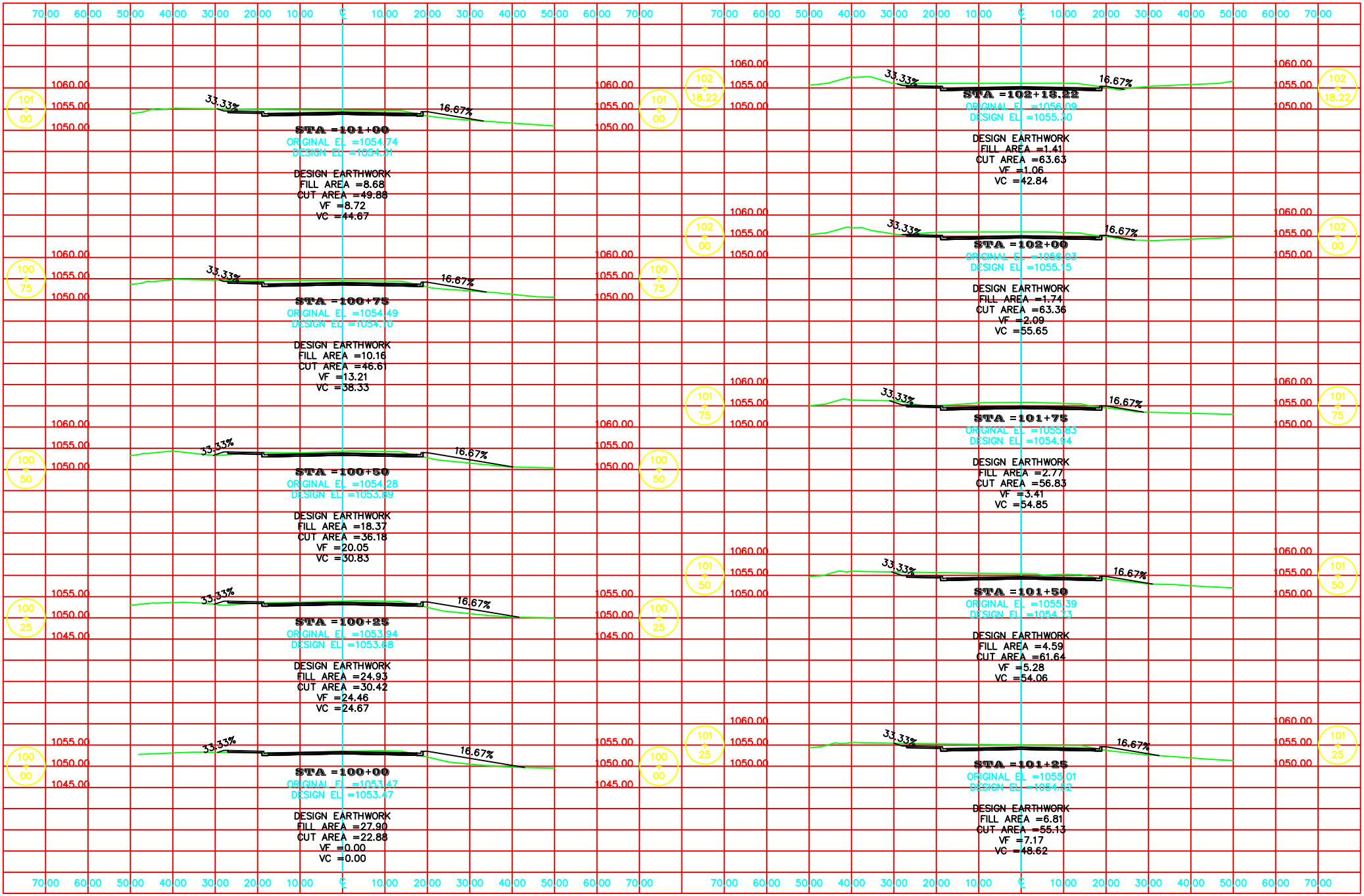
Semiminor Axis: 6356752.314140356100000000
Inverse Flattening: 298.257222101000020000

Data sources:

1. Census 1990 and 2010 data at tract level for Population and Housing Density downloaded from the U.S. Census.
2. Parcel Information is provided by the City of Moses Lake and includes data from the Grant County Assessor's Office that is downloaded from the Grant County FTP site.
3. Grant County Zoning and Comprehensive Plan Designations downloaded from the County FTP site.
4. City of Moses Lake Zoning and Comprehensive Plan Designations from the current version of the City Zoning Map.
5. National Wetlands Inventory downloaded from U.S. Fish and Wildlife.
6. Local Wetland Delineation as shown on Plats submitted to the City in Electronic format.
7. Soils Information extracted from the USDA – NRCS Soil Data Viewer.
8. Transportation Information downloaded from WSDOT including State Functional Classification and Traffic Counts.
9. Traffic Counts from the City of Moses Lake Development Engineering Division.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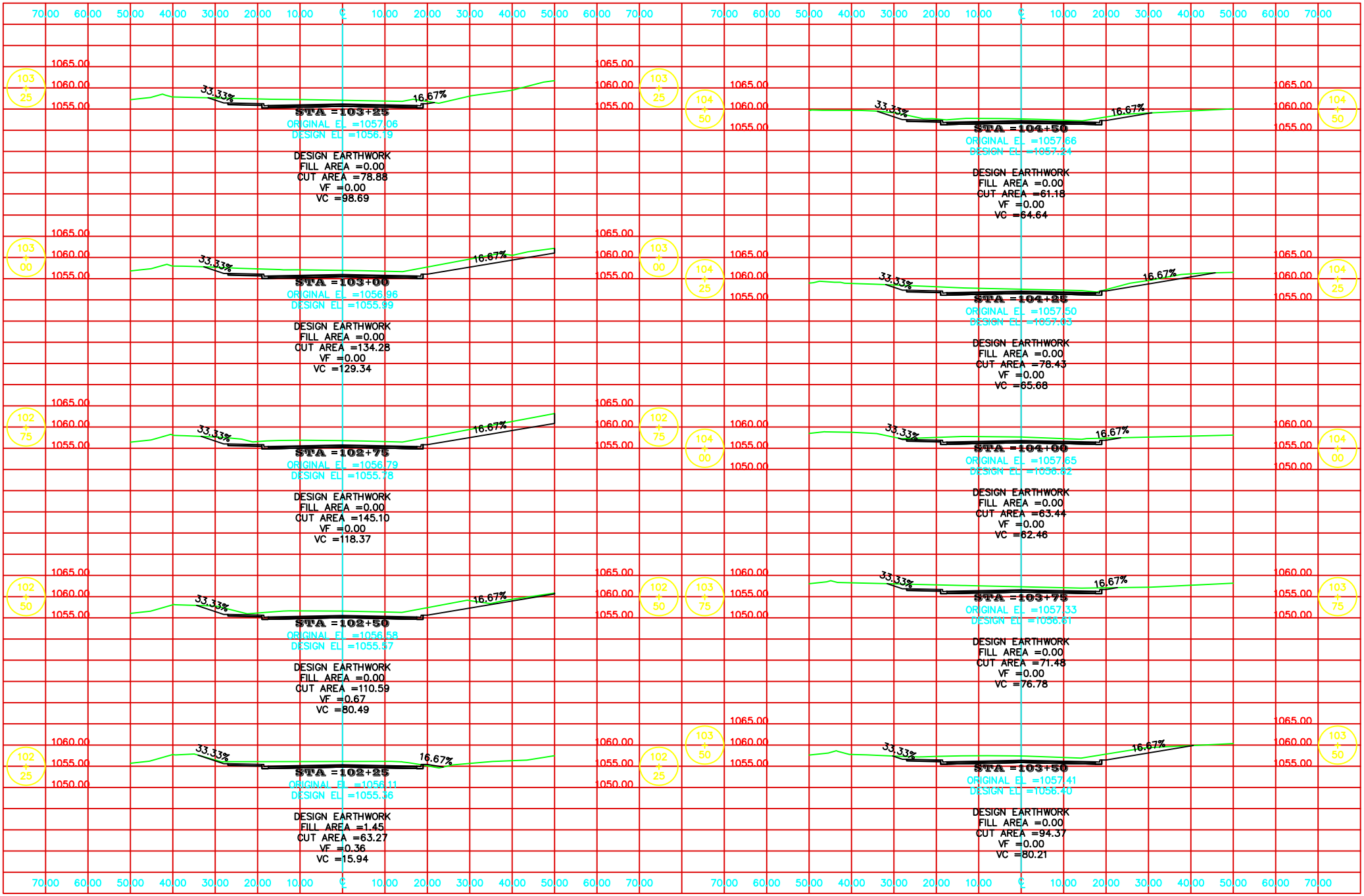
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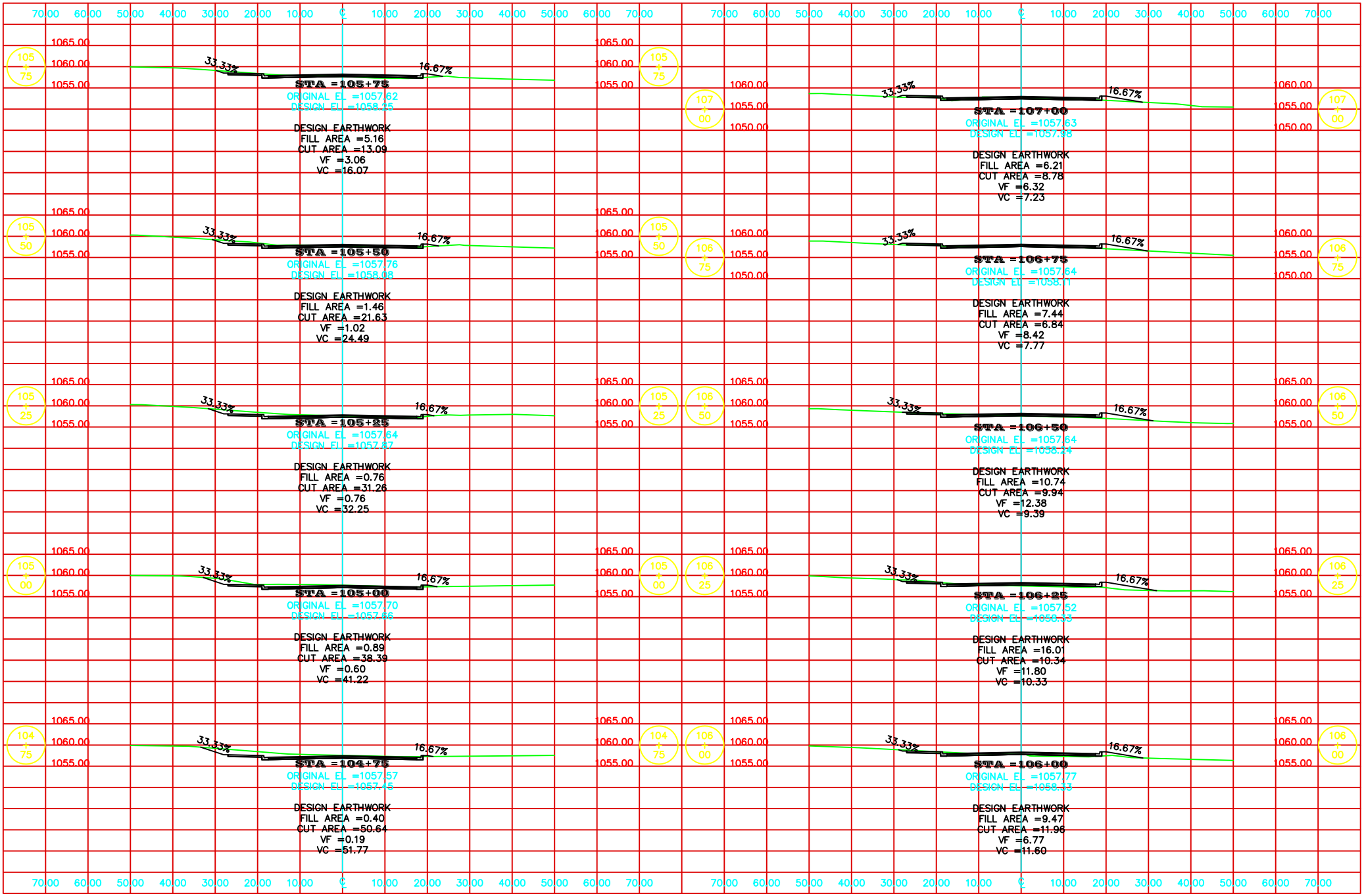
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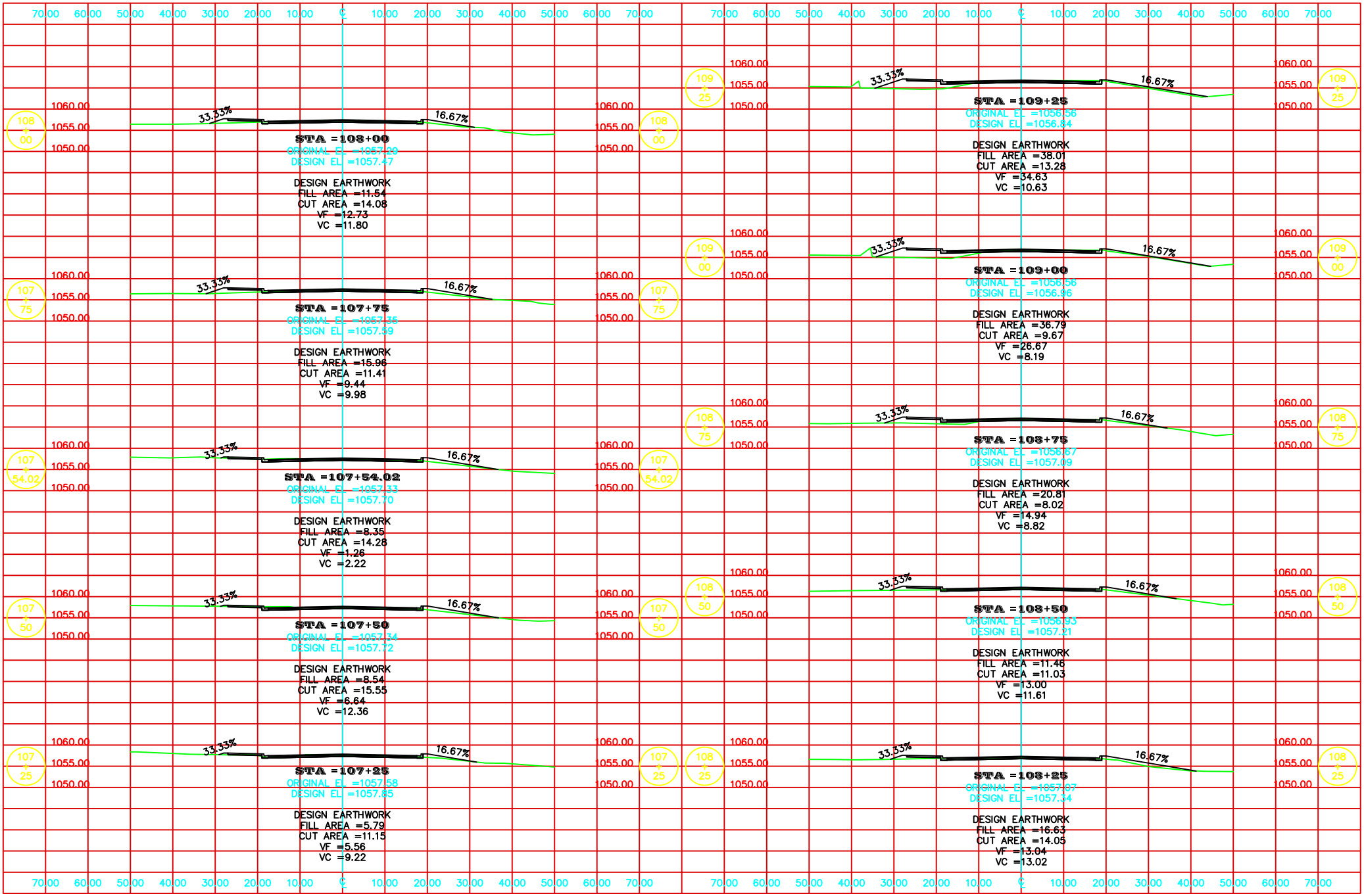
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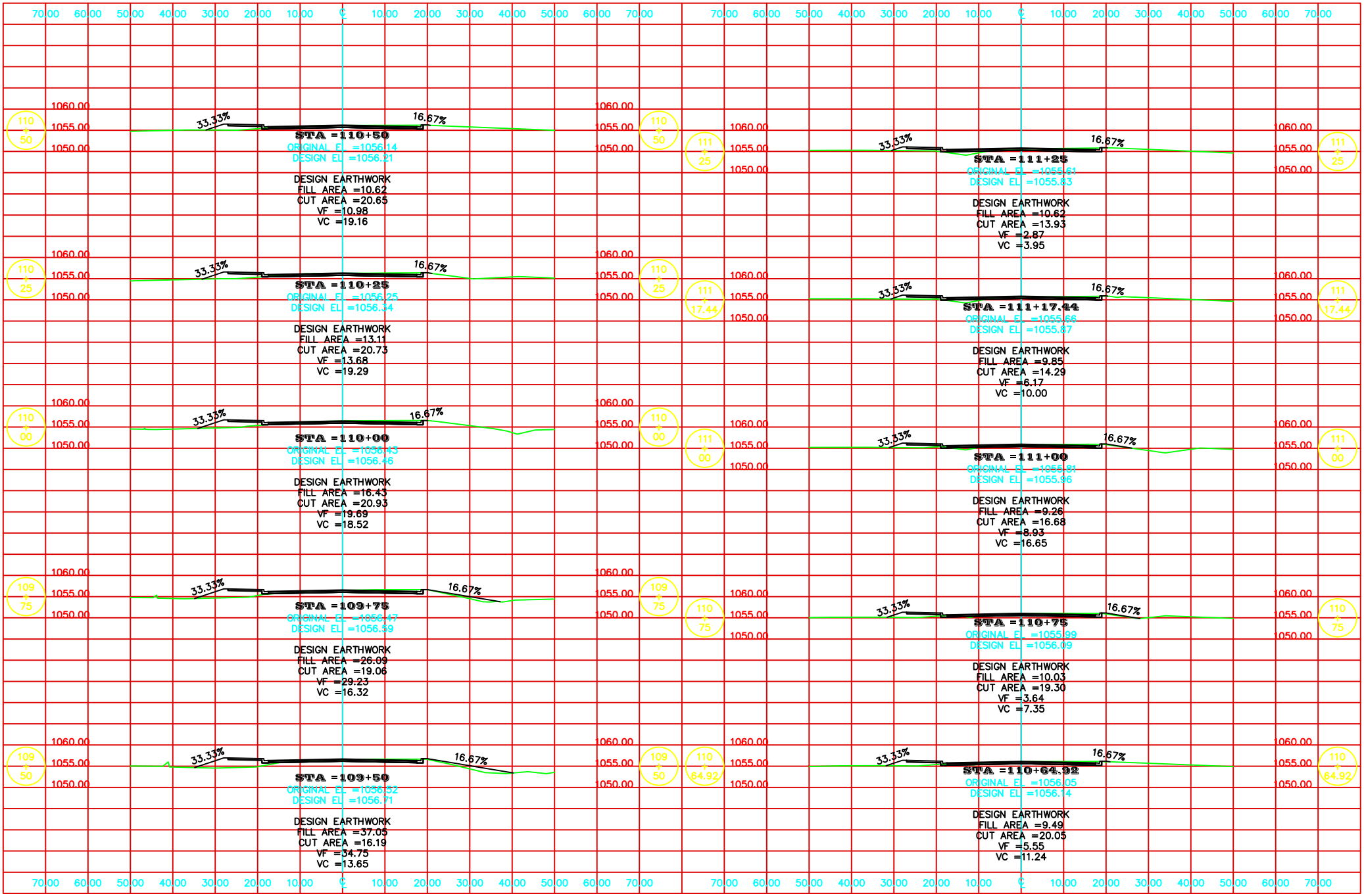
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FILL AREA =37.05
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STA =111+25
ORIGINAL EL =1055.61
DESIGN EL =1055.83
DESIGN EARTHWORK
FILL AREA =10.62
CUT AREA =13.93
VF =2.87
VC =3.95
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DESIGN EARTHWORK
FILL AREA =9.85
CUT AREA =14.29
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STA =111+00
ORIGINAL EL =1055.81
DESIGN EL =1055.96
DESIGN EARTHWORK
FILL AREA =9.26
CUT AREA =16.68
VF =8.93
VC =16.65
STA =110+75
ORIGINAL EL =1055.99
DESIGN EL =1056.09
DESIGN EARTHWORK
FILL AREA =10.03
CUT AREA =19.30
VF =3.64
VC =7.35
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DESIGN EARTHWORK
FILL AREA =9.49
CUT AREA =20.05
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VC =11.24
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16.67%
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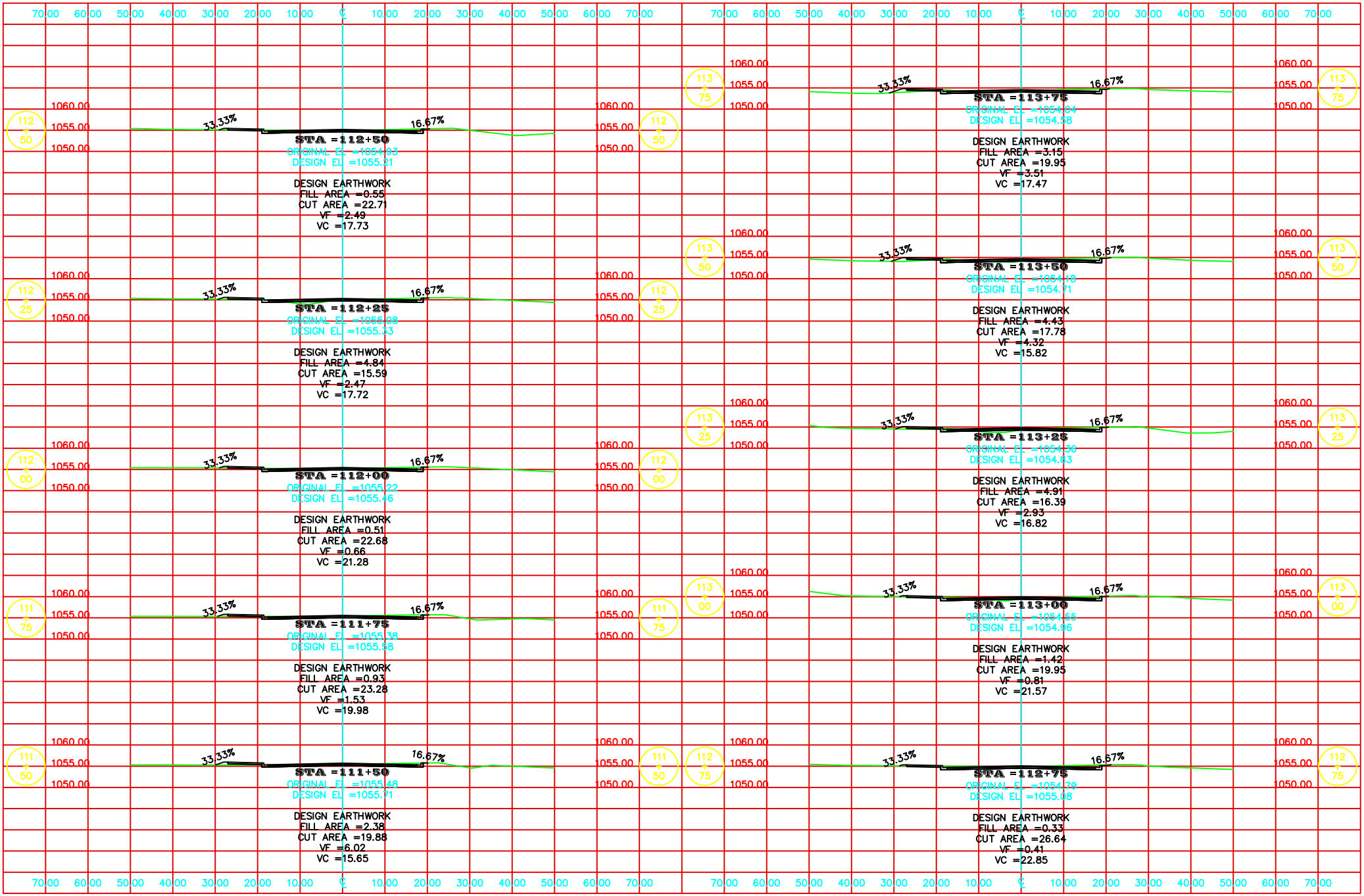
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112 + 50
33.33%
16.67%
STA =112+50
ORIGINAL EL =1054.93
DESIGN EL =1055.21
DESIGN EARTHWORK
FILL AREA =0.55
CUT AREA =22.71
VF =2.49
VC =17.73
112 + 25
STA =112+25
ORIGINAL EL =1055.08
DESIGN EL =1055.33
DESIGN EARTHWORK
FILL AREA =4.84
CUT AREA =15.59
VF =2.47
VC =17.72
112 + 00
STA =112+00
ORIGINAL EL =1055.22
DESIGN EL =1055.46
DESIGN EARTHWORK
FILL AREA =0.51
CUT AREA =22.68
VF =0.66
VC =21.28
111 + 75
STA =111+75
ORIGINAL EL =1055.38
DESIGN EL =1055.58
DESIGN EARTHWORK
FILL AREA =0.93
CUT AREA =23.28
VF =1.53
VC =19.98
111 + 50
STA =111+50
ORIGINAL EL =1055.48
DESIGN EL =1055.71
DESIGN EARTHWORK
FILL AREA =2.38
CUT AREA =19.88
VF =6.02
VC =15.65
113 + 75
STA =113+75
ORIGINAL EL =1054.84
DESIGN EL =1054.38
DESIGN EARTHWORK
FILL AREA =3.15
CUT AREA =19.95
VF =3.51
VC =17.47
113 + 50
STA =113+50
ORIGINAL EL =1054.18
DESIGN EL =1054.71
DESIGN EARTHWORK
FILL AREA =4.43
CUT AREA =17.78
VF =4.32
VC =15.82
113 + 25
STA =113+25
ORIGINAL EL =1054.50
DESIGN EL =1054.83
DESIGN EARTHWORK
FILL AREA =4.91
CUT AREA =16.39
VF =2.93
VC =16.82
113 + 00
STA =113+00
ORIGINAL EL =1054.55
DESIGN EL =1054.96
DESIGN EARTHWORK
FILL AREA =1.42
CUT AREA =19.95
VF =0.81
VC =21.57
112 + 75
STA =112+75
ORIGINAL EL =1054.79
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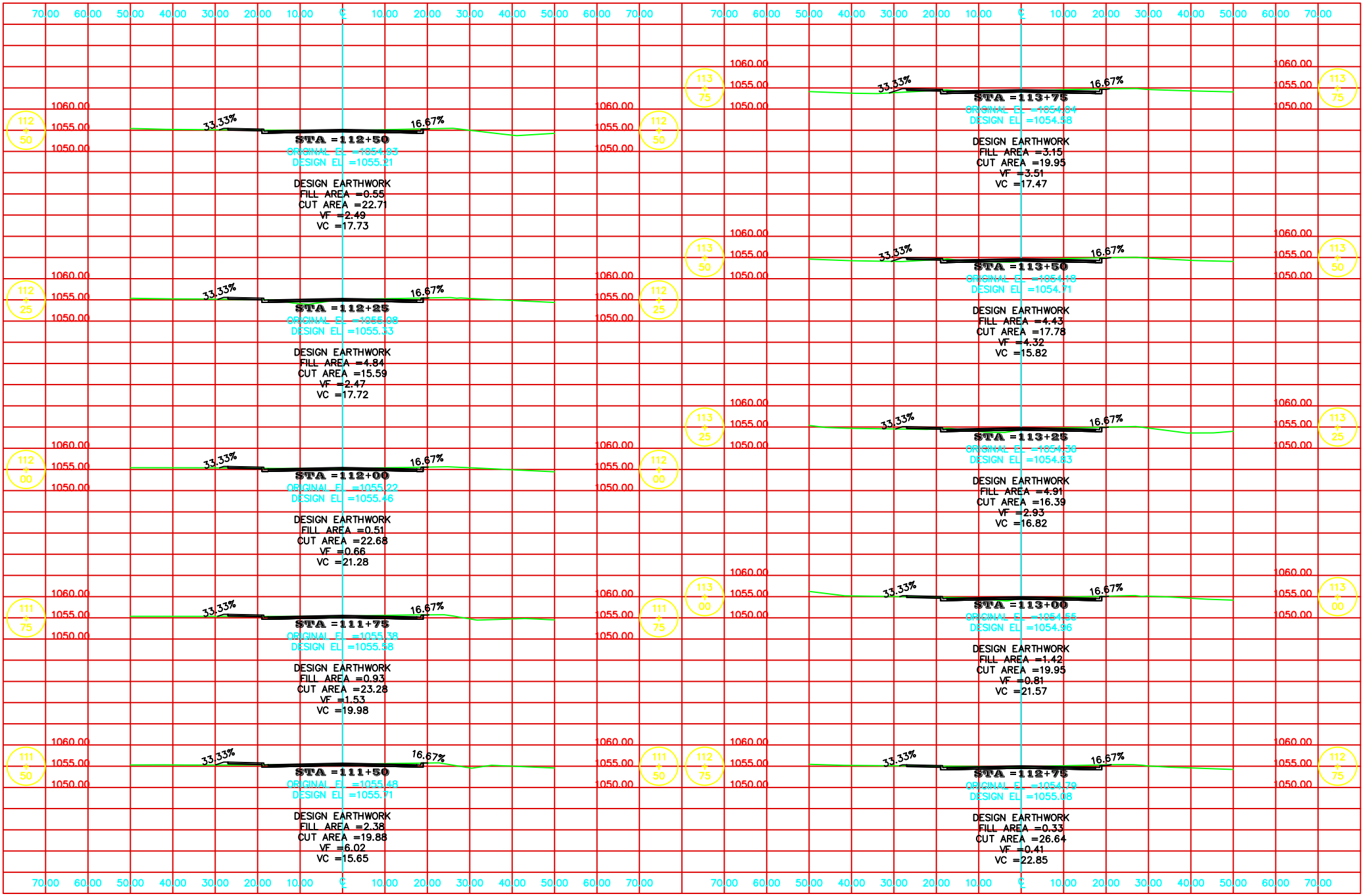
VC =22.85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112 + 50
33.33%
16.67%
STA =112+50
ORIGINAL EL =1054.93
DESIGN EL =1055.21
DESIGN EARTHWORK
FILL AREA =0.55
CUT AREA =22.71
VF =2.49
VC =17.73
112 + 25
STA =112+25
ORIGINAL EL =1055.08
DESIGN EL =1055.33
DESIGN EARTHWORK
FILL AREA =4.84
CUT AREA =15.59
VF =2.47
VC =17.72
112 + 00
STA =112+00
ORIGINAL EL =1055.22
DESIGN EL =1055.46
DESIGN EARTHWORK
FILL AREA =0.51
CUT AREA =22.68
VF =0.66
VC =21.28
111 + 75
STA =111+75
ORIGINAL EL =1055.38
DESIGN EL =1055.58
DESIGN EARTHWORK
FILL AREA =0.93
CUT AREA =23.28
VF =1.53
VC =19.98
111 + 50
STA =111+50
ORIGINAL EL =1055.48
DESIGN EL =1055.71
DESIGN EARTHWORK
FILL AREA =2.38
CUT AREA =19.88
VF =6.02
VC =15.65
113 + 75
STA =113+75
ORIGINAL EL =1054.84
DESIGN EL =1054.38
DESIGN EARTHWORK
FILL AREA =3.15
CUT AREA =19.95
VF =3.51
VC =17.47
113 + 50
STA =113+50
ORIGINAL EL =1054.18
DESIGN EL =1054.71
DESIGN EARTHWORK
FILL AREA =4.43
CUT AREA =17.78
VF =4.32
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113 + 25
STA =113+25
ORIGINAL EL =1054.50
DESIGN EL =1054.83
DESIGN EARTHWORK
FILL AREA =4.91
CUT AREA =16.39
VF =2.93
VC =16.82
113 + 00
STA =113+00
ORIGINAL EL =1054.55
DESIGN EL =1054.96
DESIGN EARTHWORK
FILL AREA =1.42
CUT AREA =19.95
VF =0.81
VC =21.57
112 + 75
STA =112+75
ORIGINAL EL =1054.79
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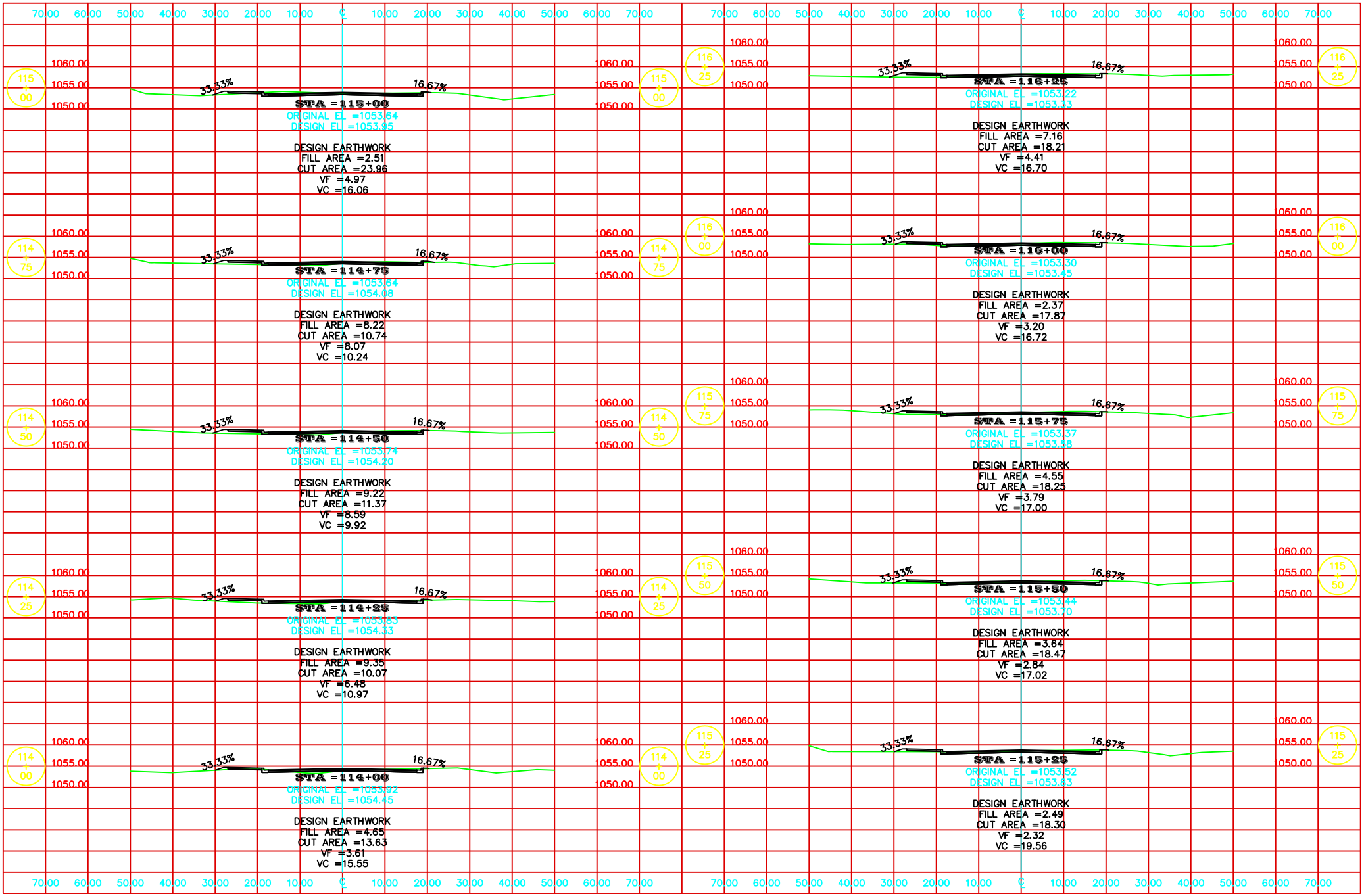
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STA =114+75
ORIGINAL EL =1053.64
DESIGN EL =1054.08
DESIGN EARTHWORK
FILL AREA =8.22
CUT AREA =10.74
VF =8.07
VC =10.24
STA =114+50
ORIGINAL EL =1053.74
DESIGN EL =1054.20
DESIGN EARTHWORK
FILL AREA =9.22
CUT AREA =11.37
VF =8.59
VC =9.92
STA =114+25
ORIGINAL EL =1053.83
DESIGN EL =1054.33
DESIGN EARTHWORK
FILL AREA =9.35
CUT AREA =10.07
VF =6.48
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STA =114+00
ORIGINAL EL =1053.92
DESIGN EL =1054.45
DESIGN EARTHWORK
FILL AREA =4.65
CUT AREA =13.63
VF =3.61
VC =15.55
STA =116+25
ORIGINAL EL =1053.22
DESIGN EL =1053.33
DESIGN EARTHWORK
FILL AREA =7.16
CUT AREA =18.21
VF =4.41
VC =16.70
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DESIGN EL =1053.45
DESIGN EARTHWORK
FILL AREA =2.37
CUT AREA =17.87
VF =3.20
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STA =115+75
ORIGINAL EL =1053.37
DESIGN EL =1053.58
DESIGN EARTHWORK
FILL AREA =4.55
CUT AREA =18.25
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STA =115+50
ORIGINAL EL =1053.44
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FILL AREA =3.64
CUT AREA =18.47
VF =2.84
VC =17.02
STA =115+25
ORIGINAL EL =1053.52
DESIGN EL =1053.83
DESIGN EARTHWORK
FILL AREA =2.49
CUT AREA =18.30
VF =2.32
VC =19.56
33.33%
16.67%
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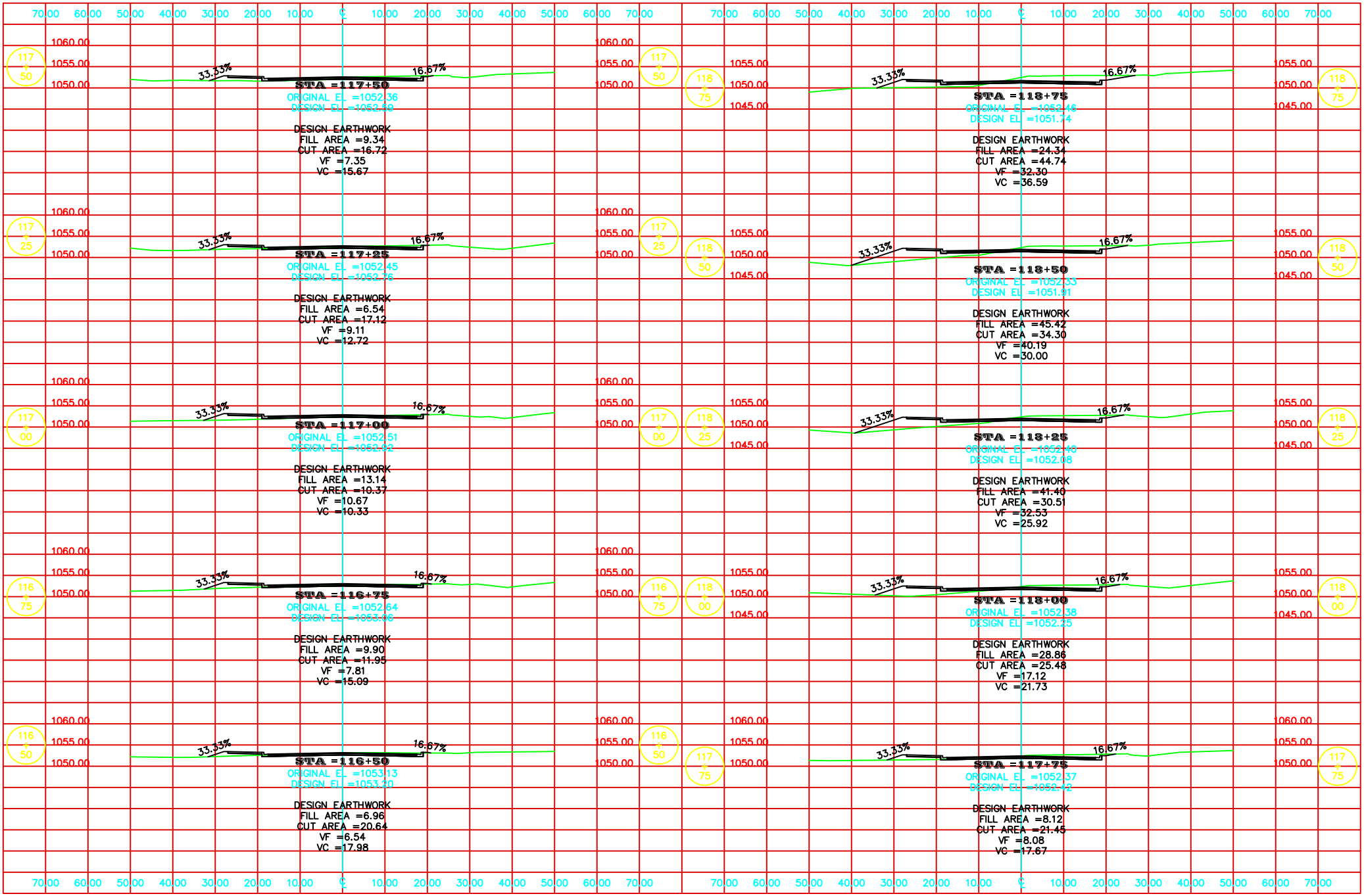
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CUT AREA =16.72
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STA =117+25
ORIGINAL EL =1052.45
DESIGN EL =1052.26
DESIGN EARTHWORK
FILL AREA =6.54
CUT AREA =17.12
VF =9.11
VC =12.72
STA =117+00
ORIGINAL EL =1052.51
DESIGN EL =1052.22
DESIGN EARTHWORK
FILL AREA =13.14
CUT AREA =10.37
VF =10.67
VC =10.33
STA =116+75
ORIGINAL EL =1052.64
DESIGN EL =1053.06
DESIGN EARTHWORK
FILL AREA =9.90
CUT AREA =11.95
VF =7.81
VC =15.09
STA =116+50
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DESIGN EL =1053.20
DESIGN EARTHWORK
FILL AREA =6.96
CUT AREA =20.64
VF =6.54
VC =17.98
STA =118+75
ORIGINAL EL =1052.46
DESIGN EL =1051.74
DESIGN EARTHWORK
FILL AREA =24.34
CUT AREA =44.74
VF =32.30
VC =36.59
STA =118+50
ORIGINAL EL =1052.33
DESIGN EL =1051.91
DESIGN EARTHWORK
FILL AREA =45.42
CUT AREA =34.30
VF =40.19
VC =30.00
STA =118+25
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DESIGN EL =1052.08
DESIGN EARTHWORK
FILL AREA =41.40
CUT AREA =30.51
VF =32.53
VC =25.92
STA =118+00
ORIGINAL EL =1052.38
DESIGN EL =1052.25
DESIGN EARTHWORK
FILL AREA =28.86
CUT AREA =25.48
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DESIGN EL =1052.42
DESIGN EARTHWORK
FILL AREA =8.12
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VF =8.08
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16.67%
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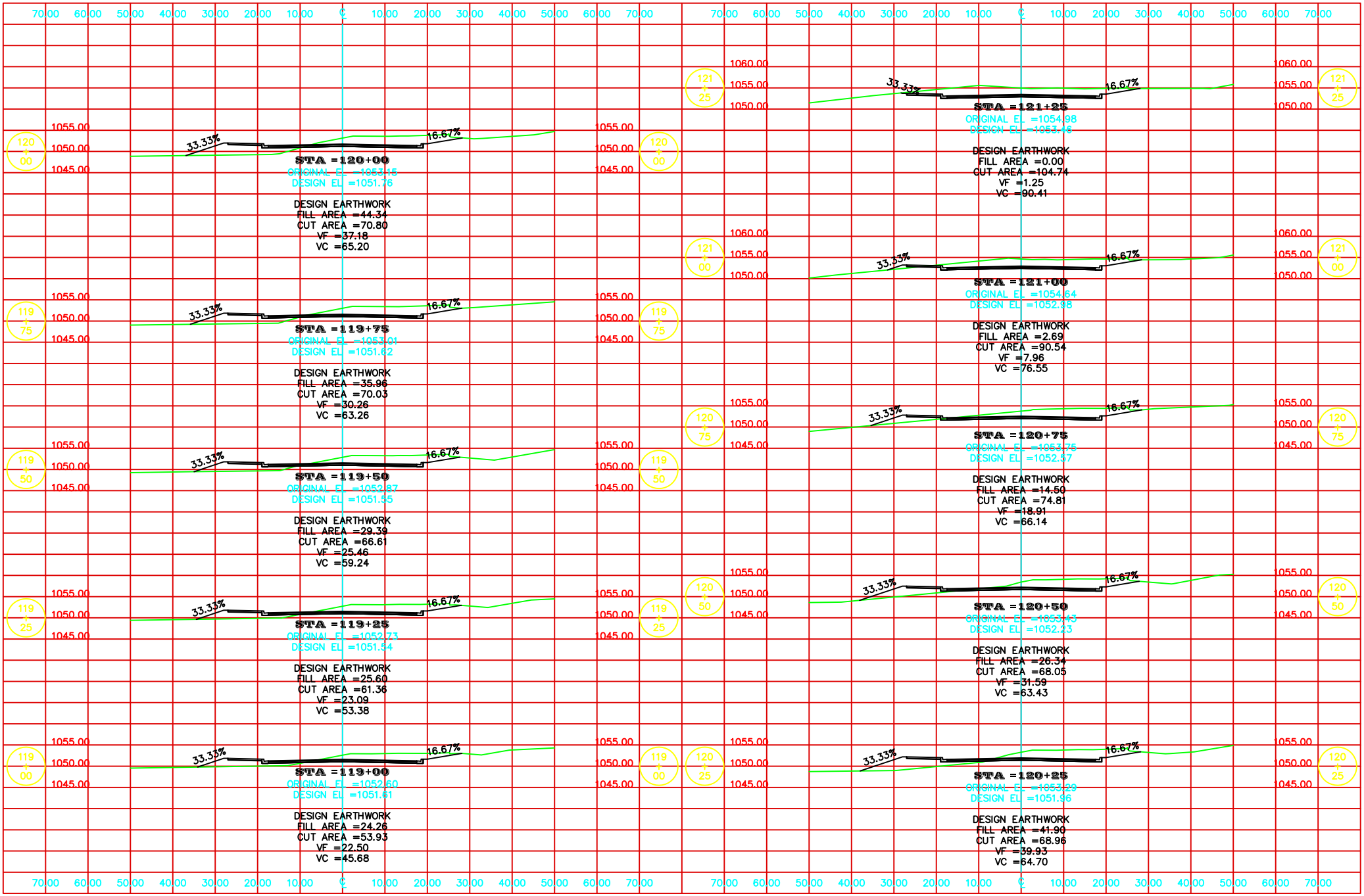
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CUT AREA =70.80
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DESIGN EARTHWORK
FILL AREA =35.96
CUT AREA =70.03
VF =30.26
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STA =119+50
ORIGINAL EL =1052.87
DESIGN EL =1051.55
DESIGN EARTHWORK
FILL AREA =29.39
CUT AREA =66.61
VF =25.46
VC =59.24
STA =119+25
ORIGINAL EL =1052.73
DESIGN EL =1051.54
DESIGN EARTHWORK
FILL AREA =25.60
CUT AREA =61.36
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STA =119+00
ORIGINAL EL =1052.60
DESIGN EL =1051.61
DESIGN EARTHWORK
FILL AREA =24.26
CUT AREA =53.93
VF =22.50
VC =45.68
STA =121+25
ORIGINAL EL =1054.98
DESIGN EL =1053.16
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =104.74
VF =1.25
VC =90.41
STA =121+00
ORIGINAL EL =1054.64
DESIGN EL =1052.98
DESIGN EARTHWORK
FILL AREA =2.69
CUT AREA =90.54
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VC =76.55
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DESIGN EARTHWORK
FILL AREA =14.50
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VF =18.91
VC =66.14
STA =120+50
ORIGINAL EL =1053.43
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DESIGN EARTHWORK
FILL AREA =26.34
CUT AREA =68.05
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DESIGN EL =1051.96
DESIGN EARTHWORK
FILL AREA =41.90
CUT AREA =68.96
VF =39.93
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16.67%
1060.00
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1050.00
1045.00
70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00
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119+50
119+25
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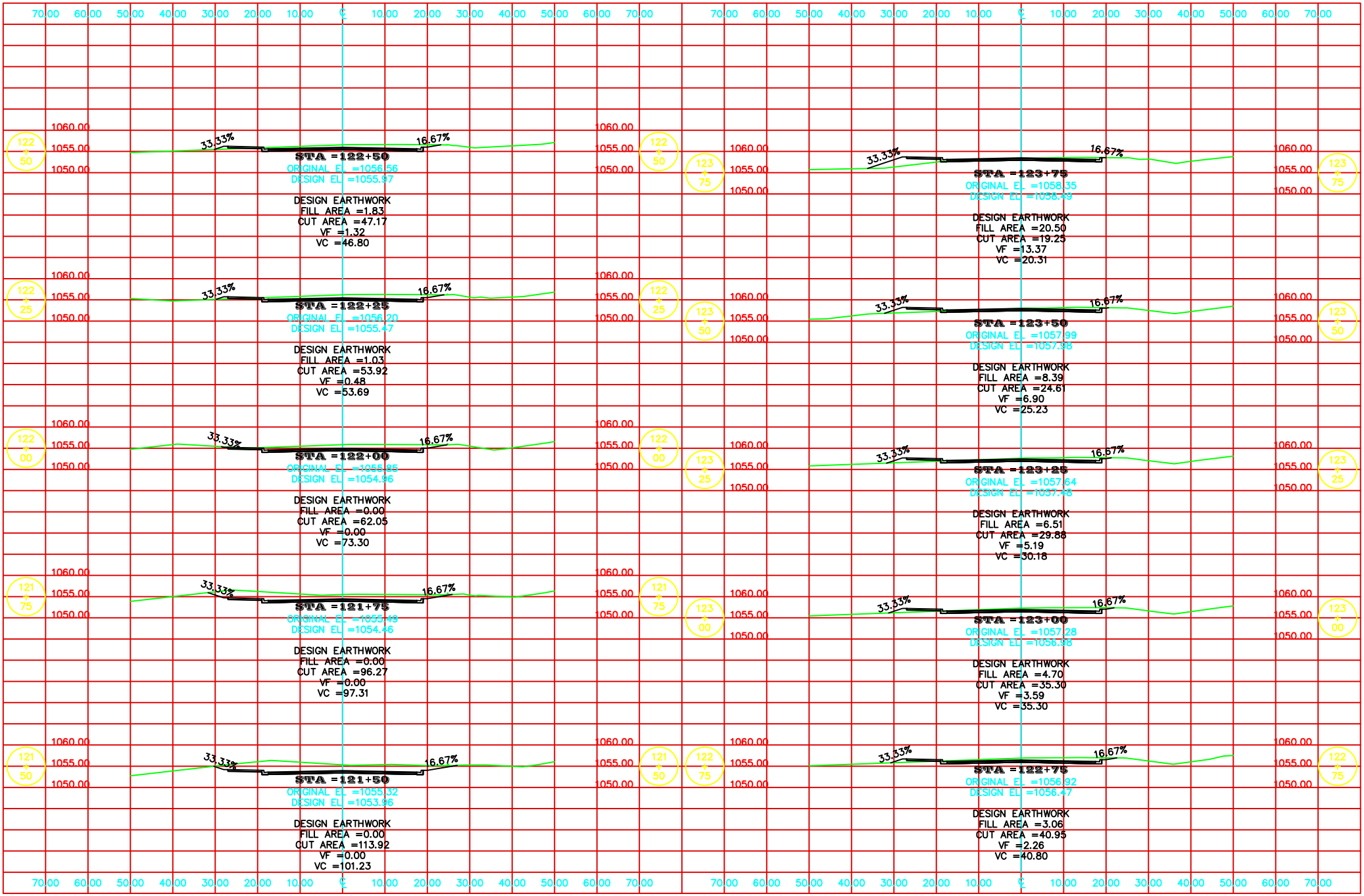
120+25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CUT AREA =53.92
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FILL AREA =0.00
CUT AREA =62.05
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DESIGN EARTHWORK
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DESIGN EARTHWORK
FILL AREA =20.50
CUT AREA =19.25
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DESIGN EL =1057.98
DESIGN EARTHWORK
FILL AREA =8.39
CUT AREA =24.61
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VC =25.23
STA =123+25
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DESIGN EL =1057.48
DESIGN EARTHWORK
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CUT AREA =29.88
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FILL AREA =4.70
CUT AREA =35.30
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16.67%
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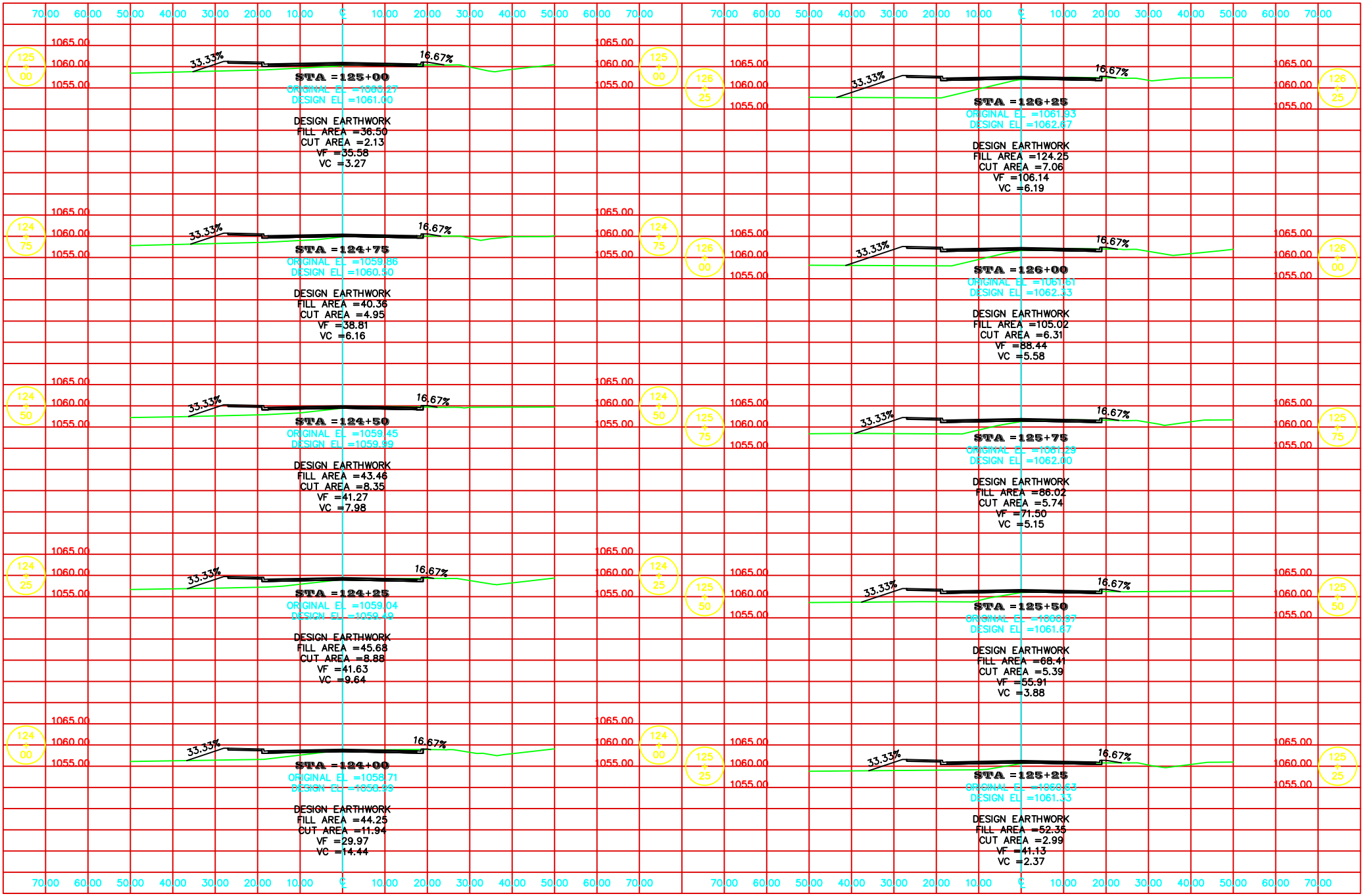
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FILL AREA =40.36
CUT AREA =4.95
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ORIGINAL EL =1059.45
DESIGN EL =1059.99
DESIGN EARTHWORK
FILL AREA =43.46
CUT AREA =8.35
VF =41.27
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STA =124+25
ORIGINAL EL =1059.04
DESIGN EL =1059.49
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CUT AREA =8.88
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FILL AREA =44.25
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FILL AREA =124.25
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FILL AREA =105.02
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FILL AREA =86.02
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FILL AREA =68.41
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16.67%
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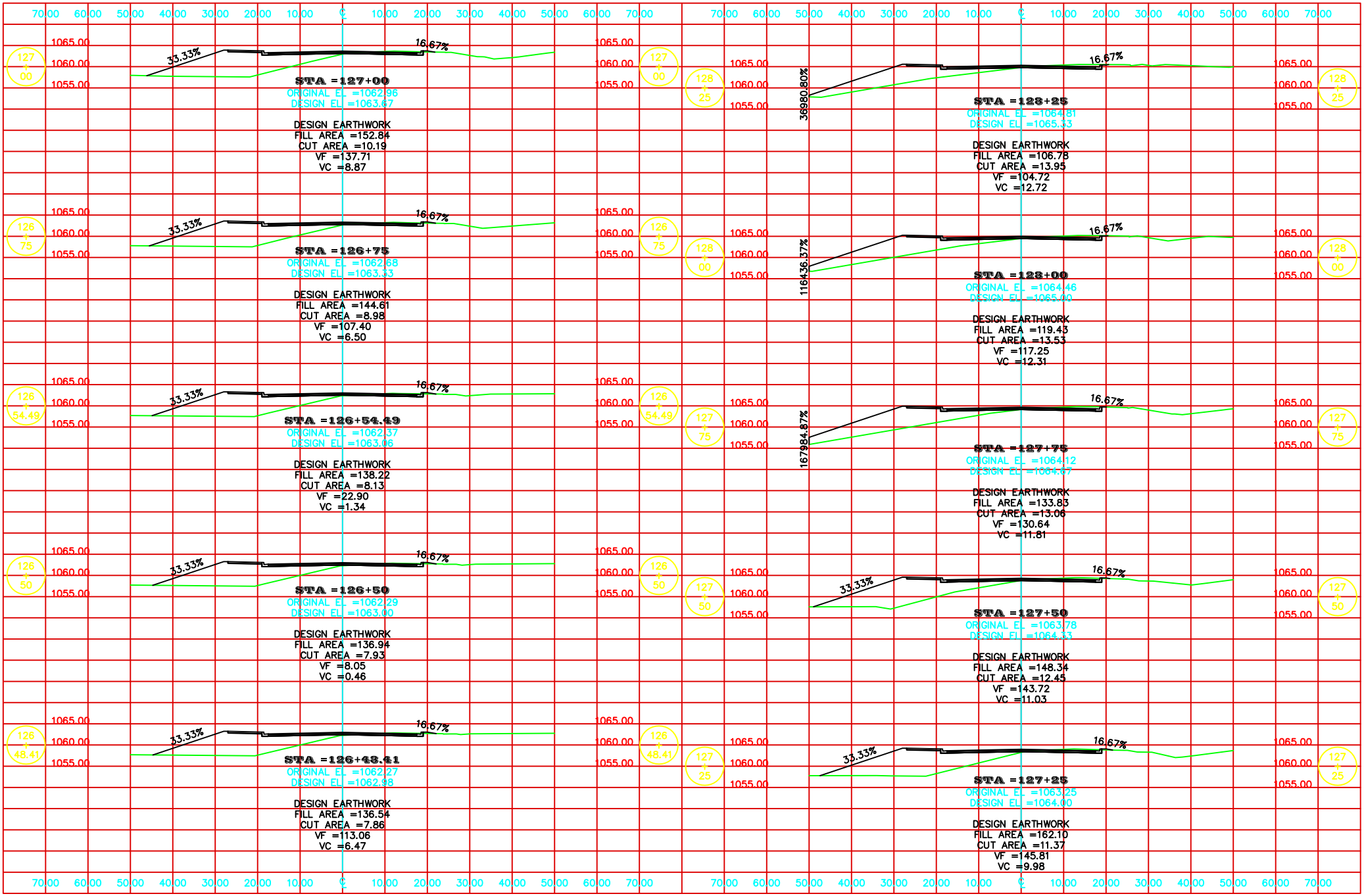
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FILL AREA =144.61
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DESIGN EARTHWORK
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DESIGN EARTHWORK
FILL AREA =136.54
CUT AREA =7.86
VF =113.06
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FILL AREA =106.78
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DESIGN EL =1065.00
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FILL AREA =119.43
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DESIGN EARTHWORK
FILL AREA =133.83
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FILL AREA =148.34
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DESIGN EARTHWORK
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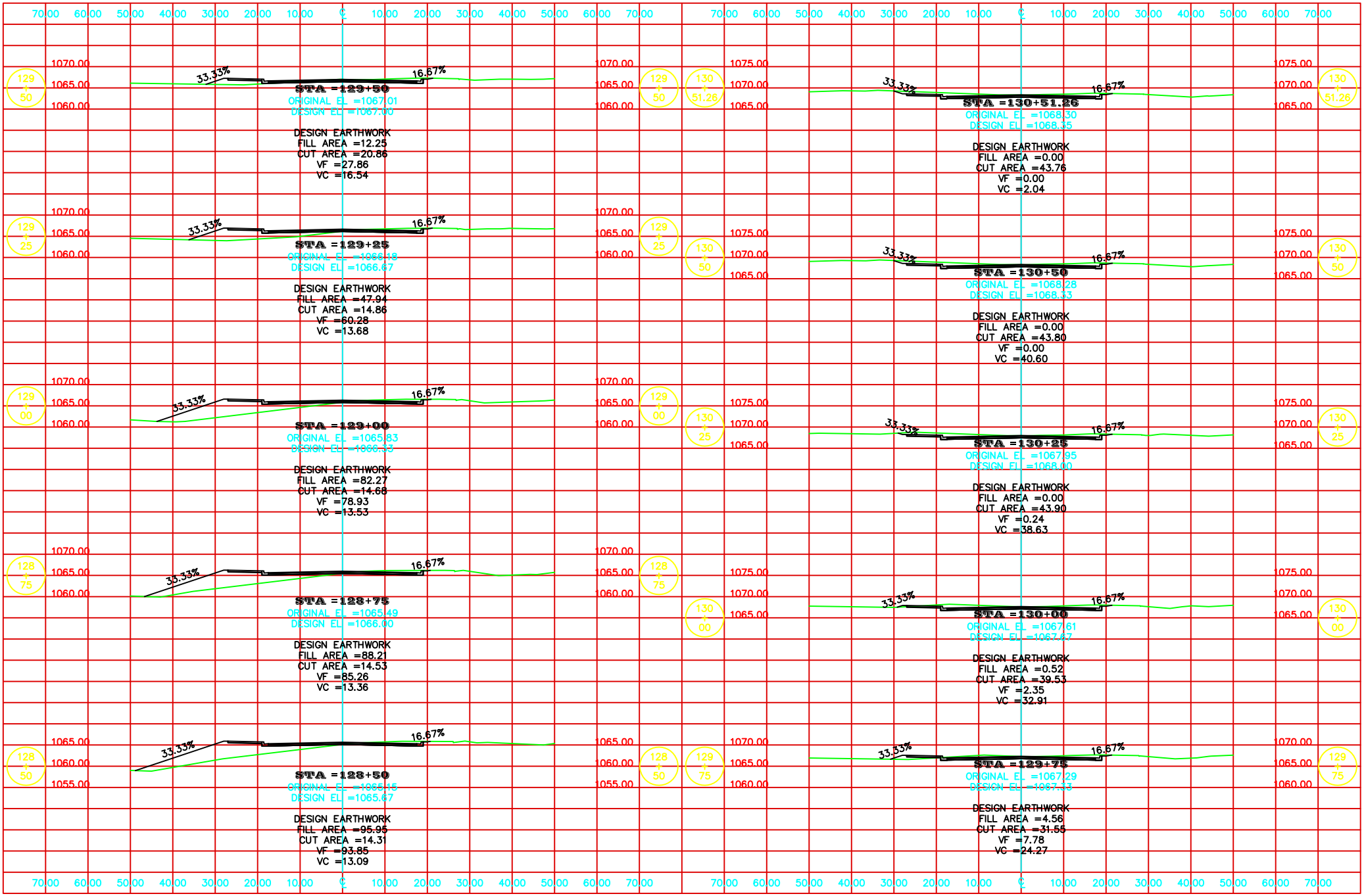
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DESIGN EARTHWORK
FILL AREA =47.94
CUT AREA =14.86
VF =60.28
VC =13.68
STA =129+00
ORIGINAL EL =1065.83
DESIGN EL =1066.33
DESIGN EARTHWORK
FILL AREA =82.27
CUT AREA =14.68
VF =78.93
VC =13.53
STA =128+75
ORIGINAL EL =1065.49
DESIGN EL =1066.00
DESIGN EARTHWORK
FILL AREA =88.21
CUT AREA =14.53
VF =85.26
VC =13.36
STA =128+50
ORIGINAL EL =1065.15
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DESIGN EARTHWORK
FILL AREA =95.95
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VF =93.85
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STA =130+51.26
ORIGINAL EL =1068.30
DESIGN EL =1068.35
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =43.76
VF =0.00
VC =2.04
STA =130+50
ORIGINAL EL =1068.28
DESIGN EL =1068.33
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =43.80
VF =0.00
VC =40.60
STA =130+25
ORIGINAL EL =1067.95
DESIGN EL =1068.00
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =43.90
VF =0.24
VC =38.63
STA =130+00
ORIGINAL EL =1067.61
DESIGN EL =1067.67
DESIGN EARTHWORK
FILL AREA =0.52
CUT AREA =39.53
VF =2.35
VC =32.91
STA =129+75
ORIGINAL EL =1067.29
DESIGN EL =1067.33
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FILL AREA =4.56
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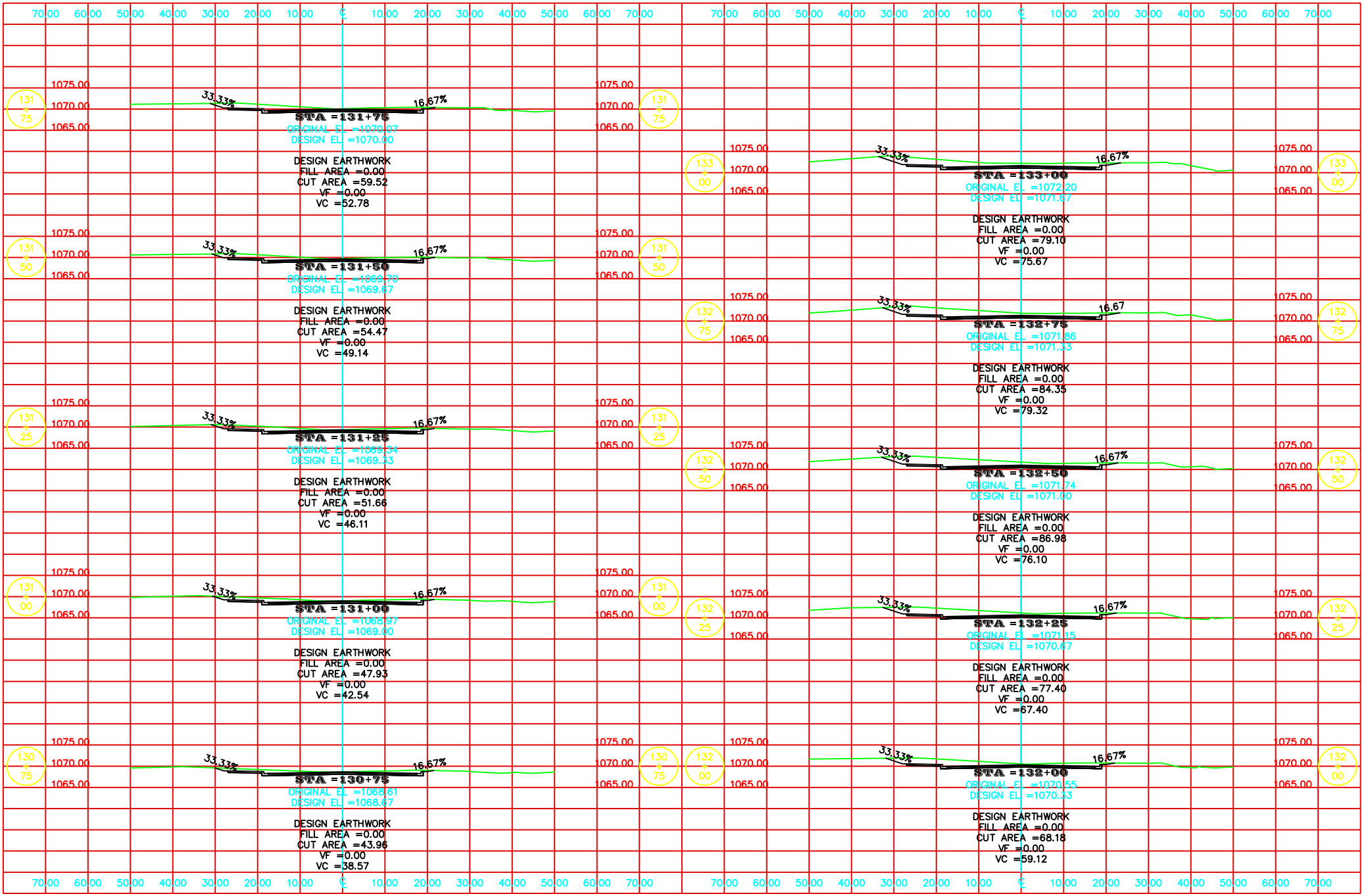
16.67%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1075.00
1070.00
1065.00
33.33%
16.67%
STA =131+75
ORIGINAL EL =1070.07
DESIGN EL =1070.00
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =59.52
VF =0.00
VC =52.78
STA =131+50
ORIGINAL EL =1069.78
DESIGN EL =1069.67
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =54.47
VF =0.00
VC =49.14
STA =131+25
ORIGINAL EL =1069.34
DESIGN EL =1069.33
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =51.66
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DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =47.93
VF =0.00
VC =42.54
STA =130+75
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DESIGN EL =1068.67
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =43.96
VF =0.00
VC =38.57
STA =133+00
ORIGINAL EL =1072.20
DESIGN EL =1071.67
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =79.10
VF =0.00
VC =75.67
STA =132+75
ORIGINAL EL =1071.86
DESIGN EL =1071.33
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =84.35
VF =0.00
VC =79.32
STA =132+50
ORIGINAL EL =1071.74
DESIGN EL =1071.00
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =86.98
VF =0.00
VC =76.10
STA =132+25
ORIGINAL EL =1071.15
DESIGN EL =1070.67
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =77.40
VF =0.00
VC =67.40
STA =132+00
ORIGINAL EL =1070.55
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DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =68.18
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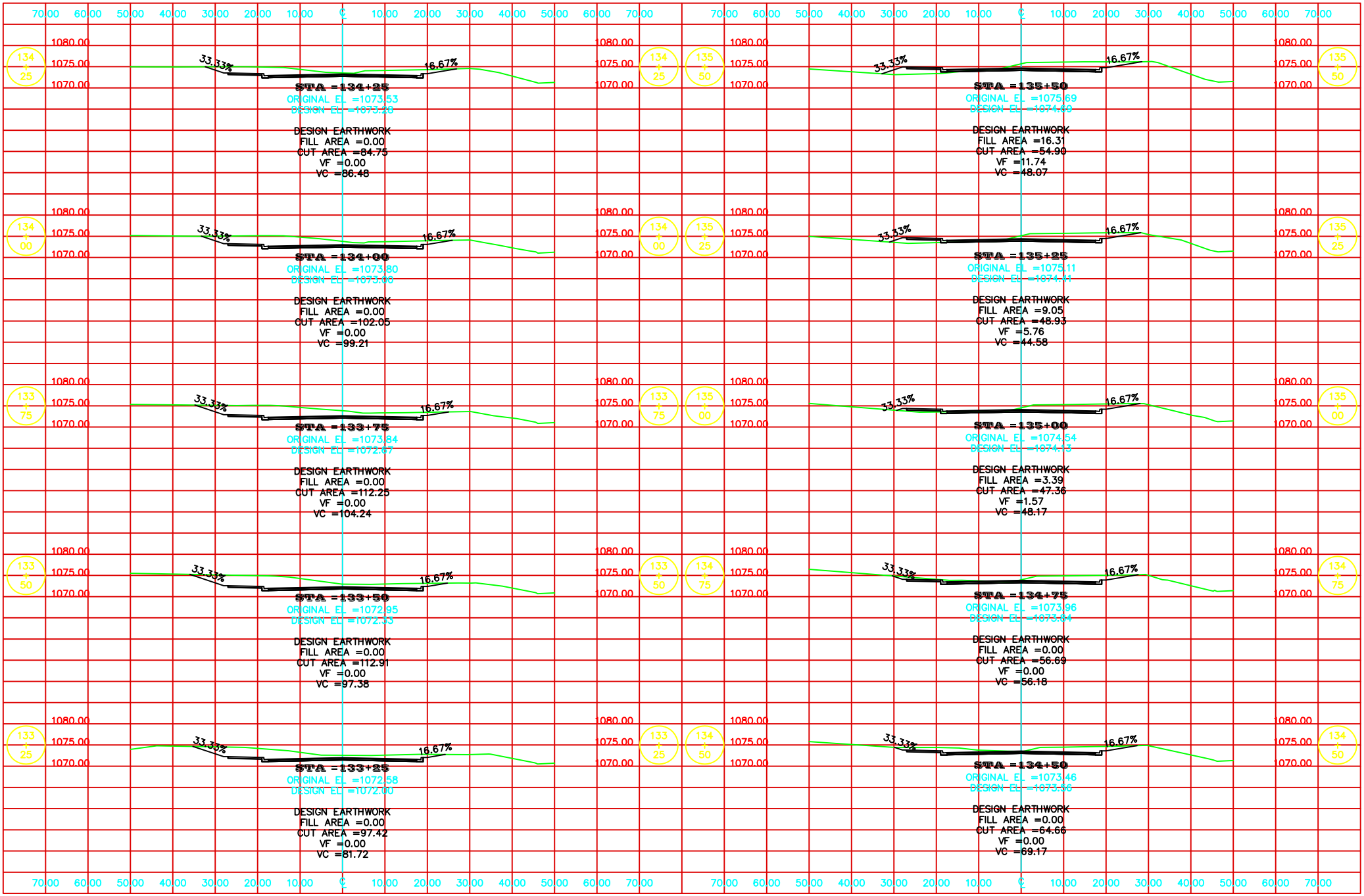
VC =59.12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DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =84.75
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VC =86.48
STA =134+00
ORIGINAL EL =1073.80
DESIGN EL =1073.05
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =102.05
VF =0.00
VC =99.21
STA =133+75
ORIGINAL EL =1073.84
DESIGN EL =1072.67
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =112.25
VF =0.00
VC =104.24
STA =133+50
ORIGINAL EL =1072.95
DESIGN EL =1072.55
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =112.91
VF =0.00
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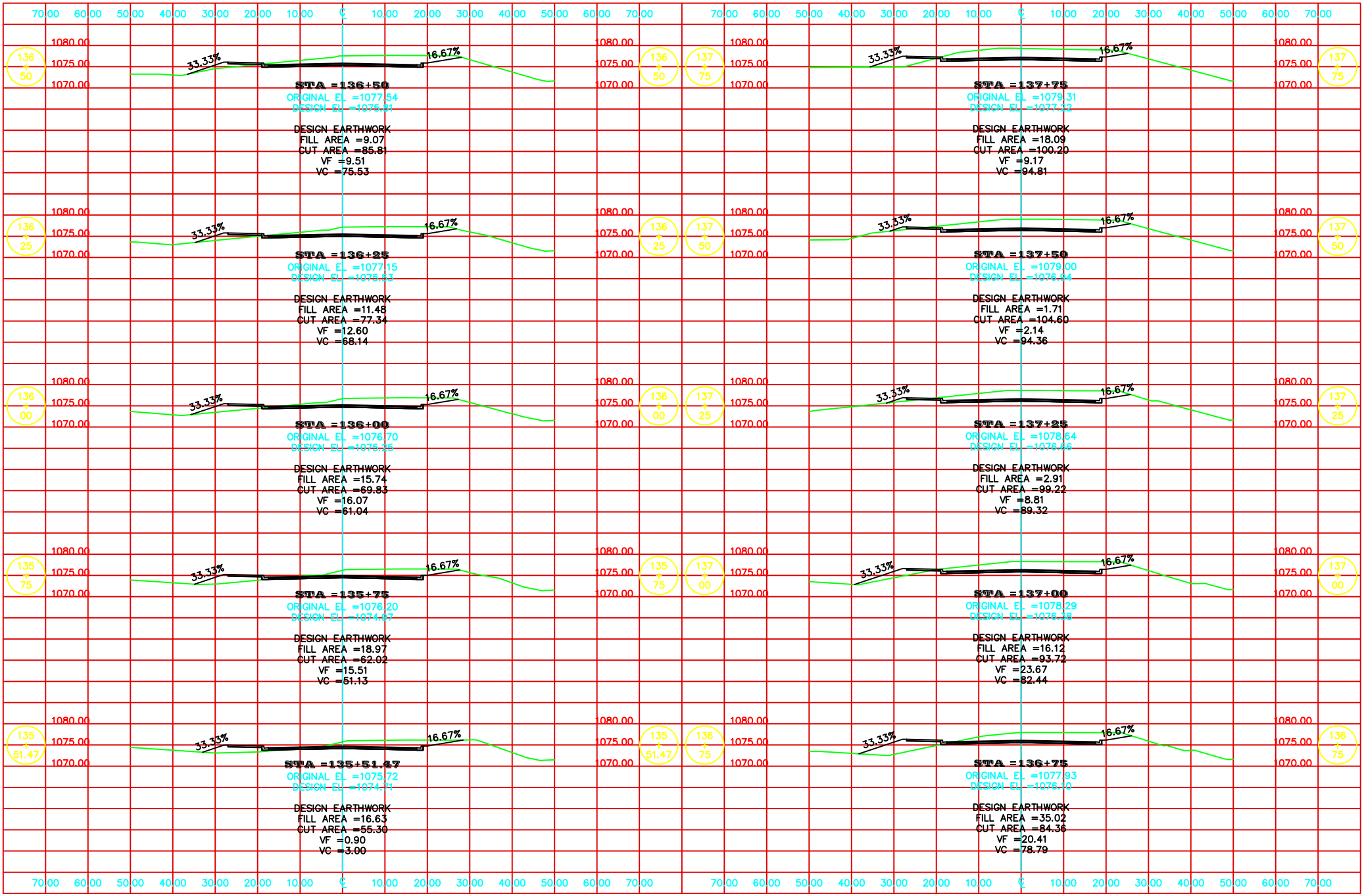
STA =133+25
ORIGINAL EL =1072.58
DESIGN EL =1072.00
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =97.42
VF =0.00
VC =81.72
STA =135+50
ORIGINAL EL =1075.69
DESIGN EL =1074.80
DESIGN EARTHWORK
FILL AREA =16.31
CUT AREA =54.90
VF =11.74
VC =48.07
STA =135+25
ORIGINAL EL =1075.11
DESIGN EL =1074.31
DESIGN EARTHWORK
FILL AREA =9.05
CUT AREA =48.93
VF =5.76
VC =44.58
STA =135+00
ORIGINAL EL =1074.54
DESIGN EL =1074.13
DESIGN EARTHWORK
FILL AREA =3.39
CUT AREA =47.36
VF =1.57
VC =48.17
STA =134+75
ORIGINAL EL =1073.96
DESIGN EL =1073.84
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =56.69
VF =0.00
VC =56.18
STA =134+50
ORIGINAL EL =1073.46
DESIGN EL =1073.56
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =64.66
VF =0.00
VC =69.17
33.33%
16.67%
1080.00
1075.00
1070.00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FILL AREA =9.07
CUT AREA =85.81
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VC =75.53
STA =136+25
ORIGINAL EL =1077.15
DESIGN EL =1075.53
DESIGN EARTHWORK
FILL AREA =11.48
CUT AREA =77.34
VF =12.60
VC =68.14
STA =136+00
ORIGINAL EL =1076.70
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DESIGN EARTHWORK
FILL AREA =15.74
CUT AREA =69.83
VF =16.07
VC =61.04
STA =135+75
ORIGINAL EL =1076.20
DESIGN EL =1074.97
DESIGN EARTHWORK
FILL AREA =18.97
CUT AREA =62.02
VF =15.51
VC =51.13
STA =135+51.47
ORIGINAL EL =1075.72
DESIGN EL =1074.73
DESIGN EARTHWORK
FILL AREA =16.63
CUT AREA =55.30
VF =0.90
VC =3.00
STA =137+75
ORIGINAL EL =1079.31
DESIGN EL =1077.32
DESIGN EARTHWORK
FILL AREA =18.09
CUT AREA =100.20
VF =9.17
VC =94.81
STA =137+50
ORIGINAL EL =1079.00
DESIGN EL =1076.84
DESIGN EARTHWORK
FILL AREA =1.71
CUT AREA =104.60
VF =2.14
VC =94.36
STA =137+25
ORIGINAL EL =1078.64
DESIGN EL =1076.46
DESIGN EARTHWORK
FILL AREA =2.91
CUT AREA =99.22
VF =8.81
VC =89.32
STA =137+00
ORIGINAL EL =1078.29
DESIGN EL =1076.38
DESIGN EARTHWORK
FILL AREA =16.12
CUT AREA =93.72
VF =23.67
VC =82.44
STA =136+75
ORIGINAL EL =1077.93
DESIGN EL =1076.30
DESIGN EARTHWORK
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CUT AREA =84.36
VF =20.41
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16.67%
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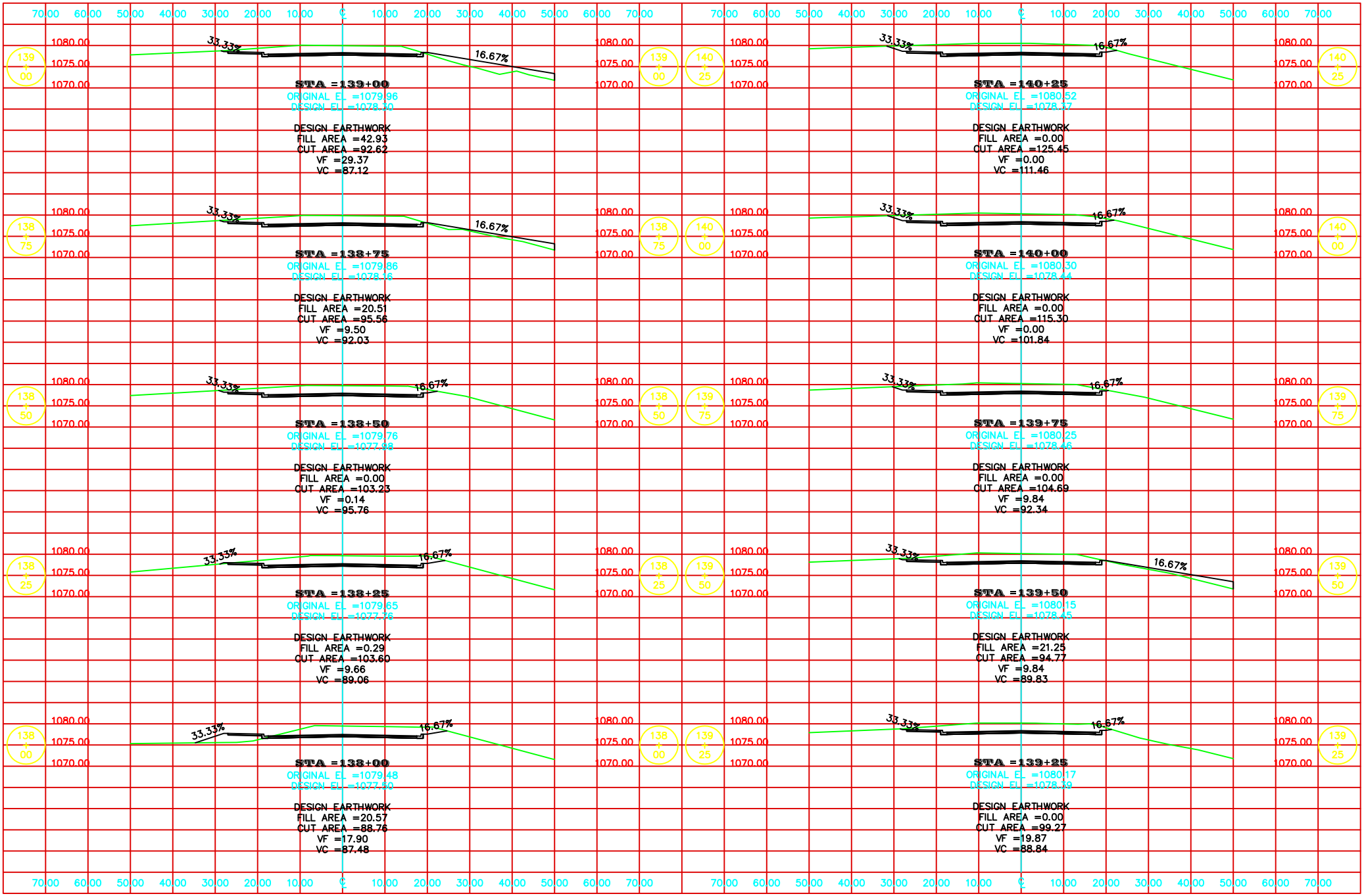
1075.00
1070.00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1080.00
1075.00
1070.00
33.33%
16.67%
STA =139+00
ORIGINAL EL =1079.96
DESIGN EL =1078.30
DESIGN EARTHWORK
FILL AREA =42.93
CUT AREA =92.62
VF =29.37
VC =87.12
STA =138+75
ORIGINAL EL =1079.86
DESIGN EL =1078.16
DESIGN EARTHWORK
FILL AREA =20.51
CUT AREA =95.56
VF =9.50
VC =92.03
STA =138+50
ORIGINAL EL =1079.76
DESIGN EL =1077.98
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =103.23
VF =0.14
VC =95.76
STA =138+25
ORIGINAL EL =1079.65
DESIGN EL =1077.78
DESIGN EARTHWORK
FILL AREA =0.29
CUT AREA =103.60
VF =9.66
VC =89.06
STA =138+00
ORIGINAL EL =1079.48
DESIGN EL =1077.60
DESIGN EARTHWORK
FILL AREA =20.57
CUT AREA =88.76
VF =17.90
VC =87.48
STA =140+25
ORIGINAL EL =1080.52
DESIGN EL =1078.37
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =125.45
VF =0.00
VC =111.46
STA =140+00
ORIGINAL EL =1080.30
DESIGN EL =1078.44
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =115.30
VF =0.00
VC =101.84
STA =139+75
ORIGINAL EL =1080.25
DESIGN EL =1078.46
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =104.69
VF =9.84
VC =92.34
STA =139+50
ORIGINAL EL =1080.15
DESIGN EL =1078.45
DESIGN EARTHWORK
FILL AREA =21.25
CUT AREA =94.77
VF =9.84
VC =89.83
STA =139+25
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DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =99.27
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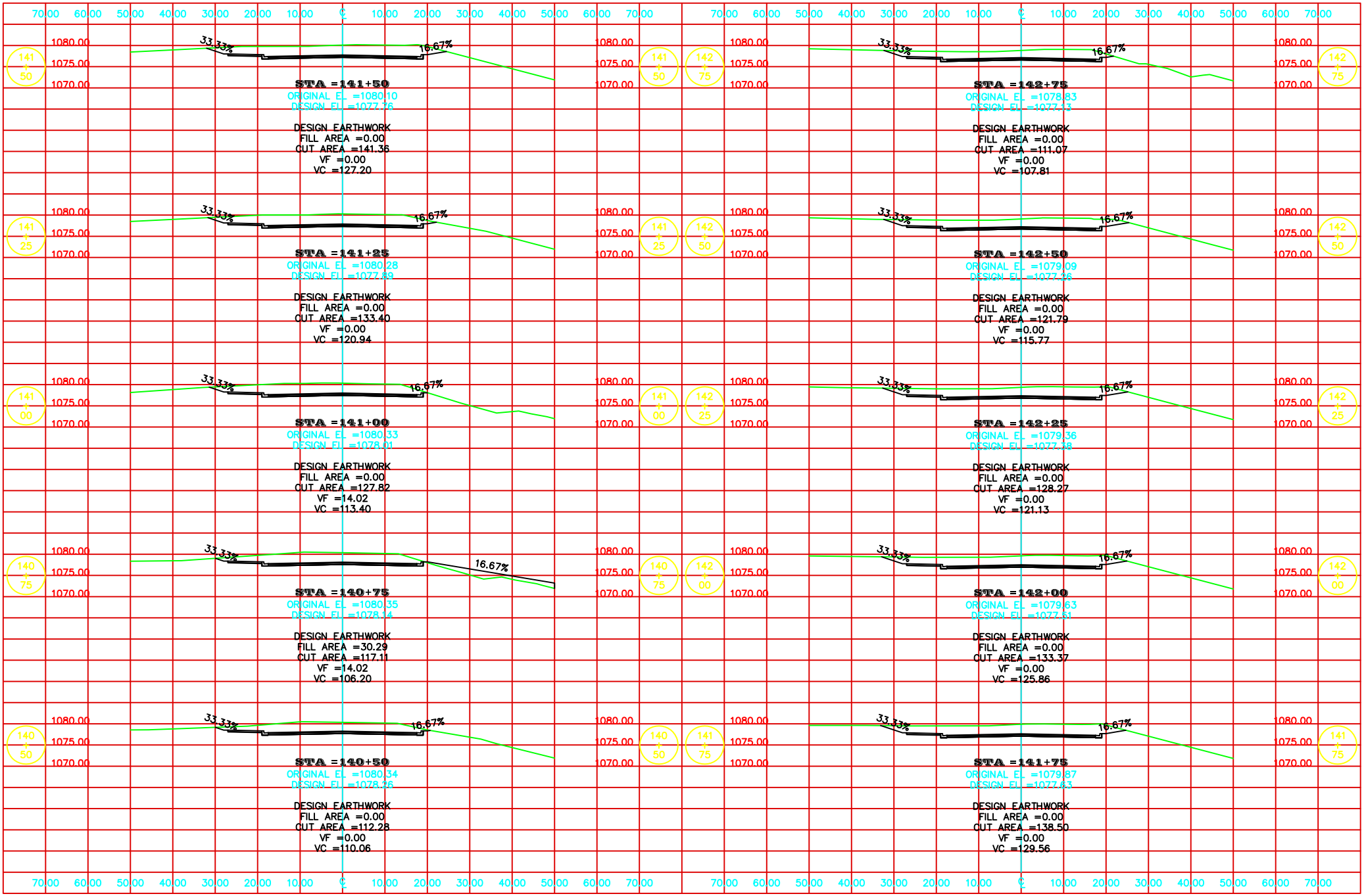
VC =88.84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1080.00
1075.00
1070.00
33.33%
16.67%
141 + 50
STA =141+50
ORIGINAL EL =1080.10
DESIGN EL =1077.76
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =141.36
VF =0.00
VC =127.20
141 + 25
STA =141+25
ORIGINAL EL =1080.28
DESIGN EL =1077.89
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =133.40
VF =0.00
VC =120.94
141 + 00
STA =141+00
ORIGINAL EL =1080.33
DESIGN EL =1078.01
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =127.82
VF =14.02
VC =113.40
140 + 75
STA =140+75
ORIGINAL EL =1080.35
DESIGN EL =1078.14
DESIGN EARTHWORK
FILL AREA =30.29
CUT AREA =117.11
VF =14.02
VC =106.20
140 + 50
STA =140+50
ORIGINAL EL =1080.34
DESIGN EL =1078.26
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =112.28
VF =0.00
VC =110.06
142 + 75
STA =142+75
ORIGINAL EL =1078.83
DESIGN EL =1077.43
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =111.07
VF =0.00
VC =107.81
142 + 50
STA =142+50
ORIGINAL EL =1079.09
DESIGN EL =1077.66
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =121.79
VF =0.00
VC =115.77
142 + 25
STA =142+25
ORIGINAL EL =1079.36
DESIGN EL =1077.88
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =128.27
VF =0.00
VC =121.13
142 + 00
STA =142+00
ORIGINAL EL =1079.63
DESIGN EL =1077.91
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =133.37
VF =0.00
VC =125.86
141 + 75
STA =141+75
ORIGINAL EL =1079.87
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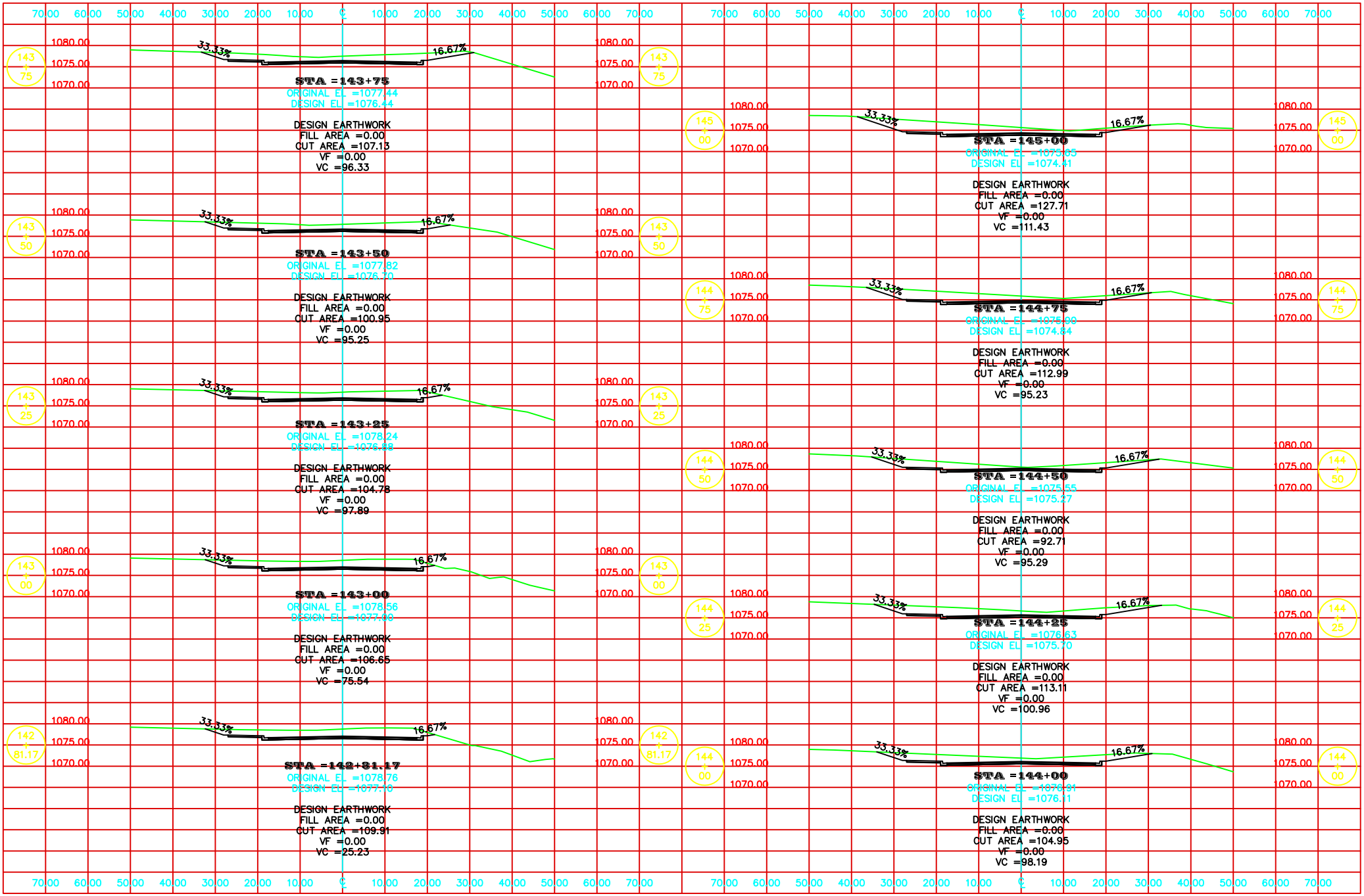
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =138.50
VF =0.00
VC =129.56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1080.00
1075.00
1070.00
33.33%
16.67%
143 + 75
STA =143+75
ORIGINAL EL =1077.44
DESIGN EL =1076.44
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =107.13
VF =0.00
VC =96.33
143 + 50
STA =143+50
ORIGINAL EL =1077.82
DESIGN EL =1076.70
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =100.95
VF =0.00
VC =95.25
143 + 25
STA =143+25
ORIGINAL EL =1078.24
DESIGN EL =1076.88
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =104.78
VF =0.00
VC =97.89
143 + 00
STA =143+00
ORIGINAL EL =1078.56
DESIGN EL =1077.98
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =106.65
VF =0.00
VC =75.54
142 + 81.17
STA =142+81.17
ORIGINAL EL =1078.76
DESIGN EL =1077.76
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =109.91
VF =0.00
VC =25.23
145 + 00
STA =145+00
ORIGINAL EL =1075.05
DESIGN EL =1074.41
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =127.71
VF =0.00
VC =111.43
144 + 75
STA =144+75
ORIGINAL EL =1075.00
DESIGN EL =1074.84
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =112.99
VF =0.00
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144 + 50
STA =144+50
ORIGINAL EL =1075.55
DESIGN EL =1075.27
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =92.71
VF =0.00
VC =95.29
144 + 25
STA =144+25
ORIGINAL EL =1076.63
DESIGN EL =1075.70
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =113.11
VF =0.00
VC =100.96
144 + 00
STA =144+00
ORIGINAL EL =1076.91
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DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =104.95
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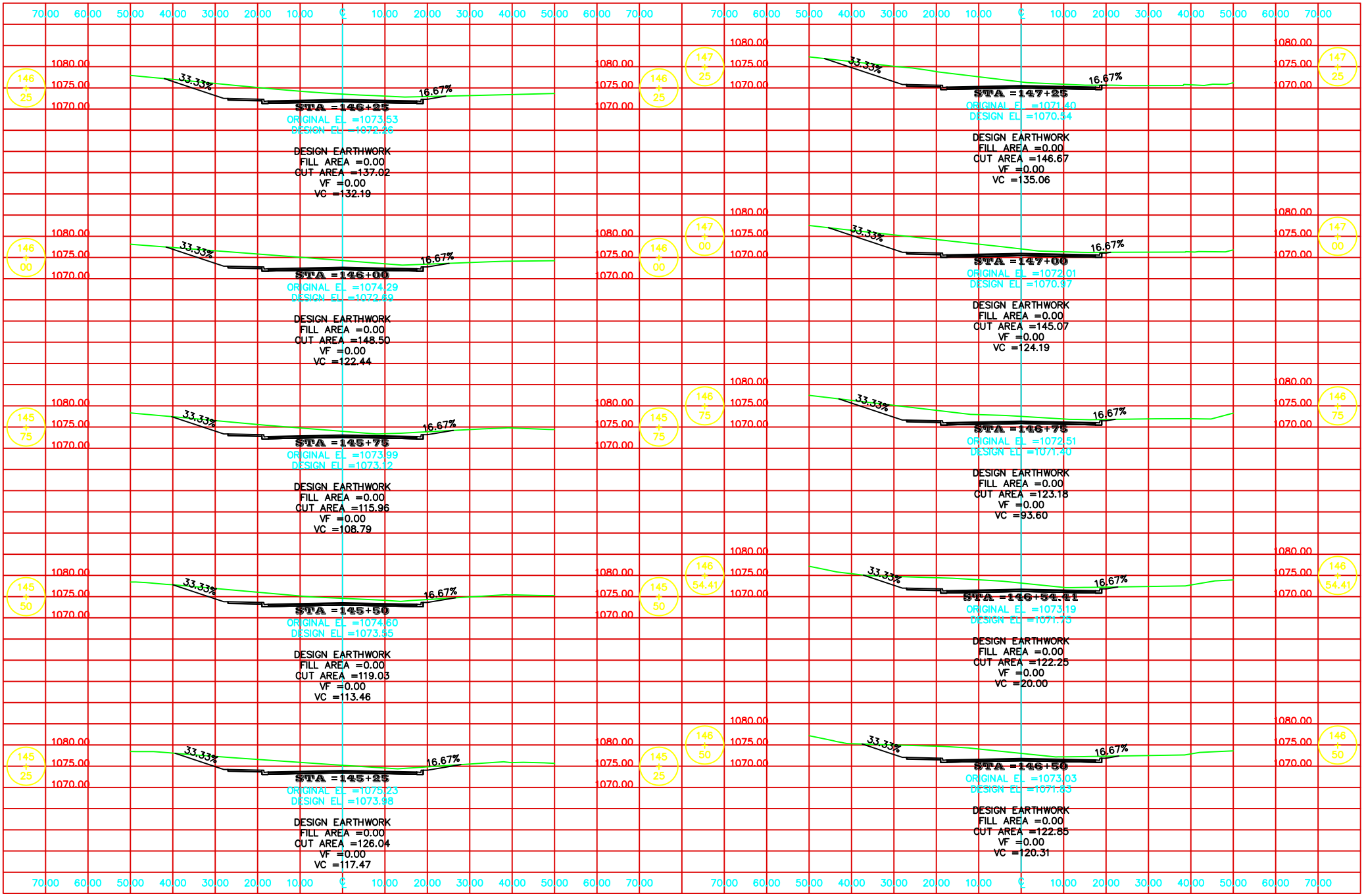
VC =98.19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FILL AREA =0.00
CUT AREA =137.02
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STA =146+00
ORIGINAL EL =1074.29
DESIGN EL =1072.69
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =148.50
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VC =122.44
STA =145+75
ORIGINAL EL =1073.99
DESIGN EL =1073.12
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =115.96
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VC =108.79
STA =145+50
ORIGINAL EL =1074.60
DESIGN EL =1073.35
DESIGN EARTHWORK
FILL AREA =0.00
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VF =0.00
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ORIGINAL EL =1075.23
DESIGN EL =1073.98
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =126.04
VF =0.00
VC =117.47
STA =147+25
ORIGINAL EL =1071.40
DESIGN EL =1070.34
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =146.67
VF =0.00
VC =135.06
STA =147+00
ORIGINAL EL =1072.01
DESIGN EL =1070.97
DESIGN EARTHWORK
FILL AREA =0.00
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STA =146+75
ORIGINAL EL =1072.51
DESIGN EL =1071.40
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =123.18
VF =0.00
VC =93.60
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ORIGINAL EL =1073.19
DESIGN EL =1071.73
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =122.25
VF =0.00
VC =20.00
STA =146+50
ORIGINAL EL =1073.03
DESIGN EL =1071.83
DESIGN EARTHWORK
FILL AREA =0.00
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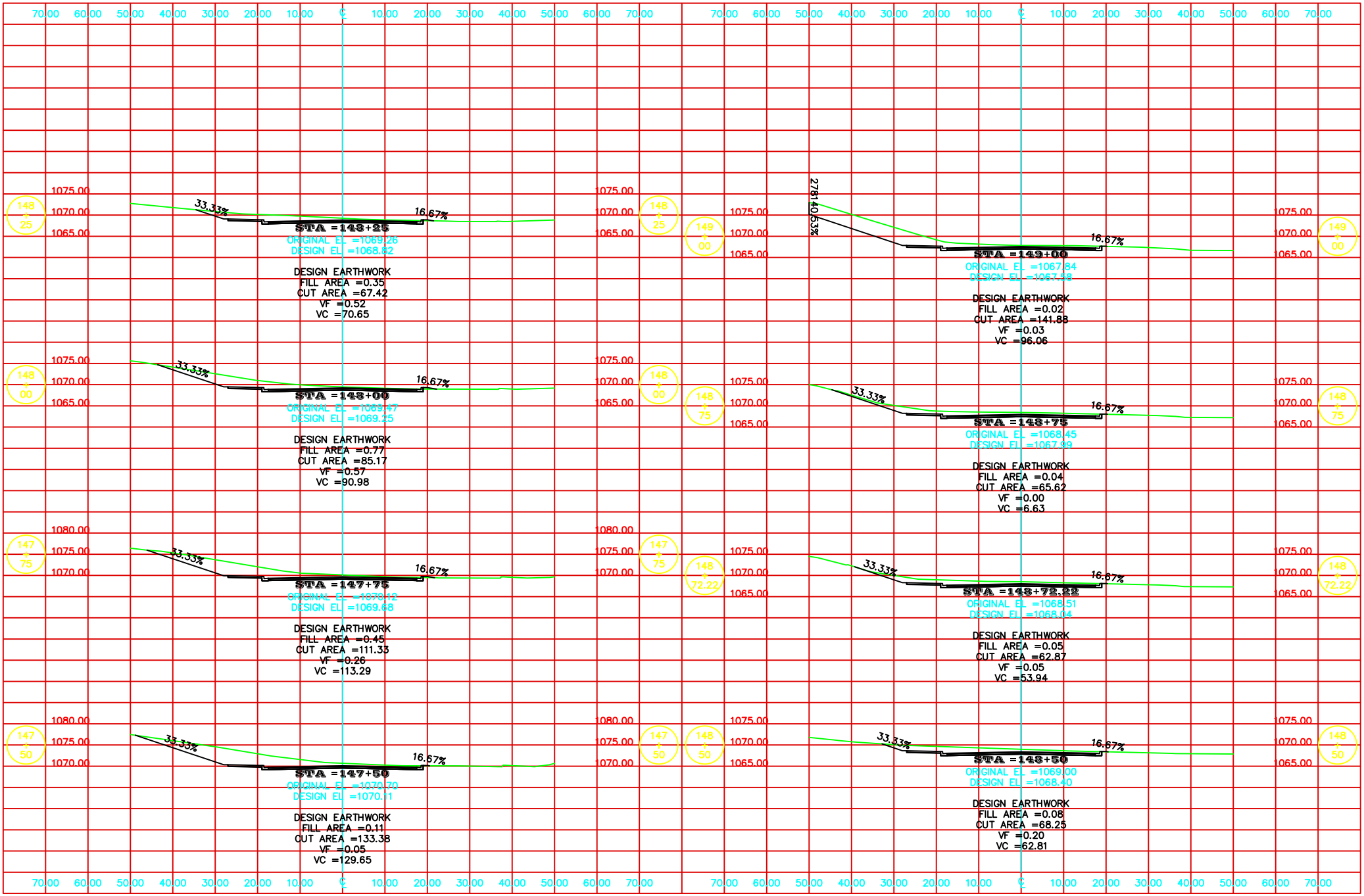
VF =0.00
VC =120.31
33.33%
16.67%
1080.00
1075.00
1070.00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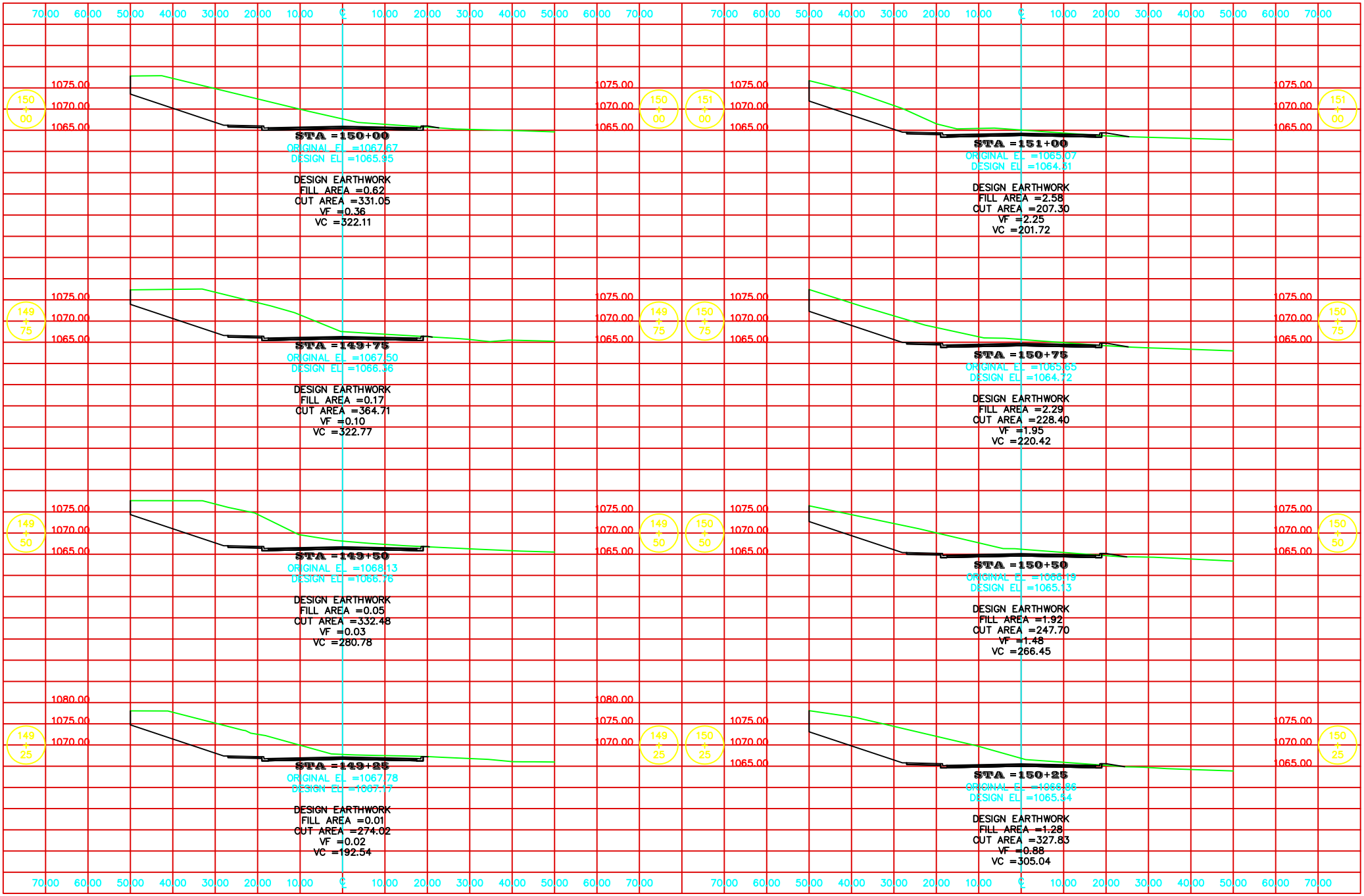
1075.00
1070.00
1065.00
1080.00
1075.00
1070.00
148 + 25
148 + 00
147 + 75
147 + 50
33.33%
16.67%
STA =148+25
ORIGINAL EL =1069.26
DESIGN EL =1068.82
DESIGN EARTHWORK
FILL AREA =0.35
CUT AREA =67.42
VF =0.52
VC =70.65
STA =148+00
ORIGINAL EL =1069.47
DESIGN EL =1069.25
DESIGN EARTHWORK
FILL AREA =0.77
CUT AREA =85.17
VF =0.57
VC =90.98
STA =147+75
ORIGINAL EL =1070.12
DESIGN EL =1069.68
DESIGN EARTHWORK
FILL AREA =0.45
CUT AREA =111.33
VF =0.26
VC =113.29
STA =147+50
ORIGINAL EL =1070.70
DESIGN EL =1070.11
DESIGN EARTHWORK
FILL AREA =0.11
CUT AREA =133.38
VF =0.05
VC =129.65
2781+40.53%
149 + 00
148 + 75
148 + 72.22
148 + 50
STA =149+00
ORIGINAL EL =1067.84
DESIGN EL =1067.88
DESIGN EARTHWORK
FILL AREA =0.02
CUT AREA =141.88
VF =0.03
VC =96.06
STA =148+75
ORIGINAL EL =1068.45
DESIGN EL =1067.99
DESIGN EARTHWORK
FILL AREA =0.04
CUT AREA =65.62
VF =0.00
VC =6.63
STA =148+72.22
ORIGINAL EL =1068.51
DESIGN EL =1068.04
DESIGN EARTHWORK
FILL AREA =0.05
CUT AREA =62.87
VF =0.05
VC =53.94
STA =148+50
ORIGINAL EL =1069.00
DESIGN EL =1068.40
DESIGN EARTHWORK
FILL AREA =0.08
CUT AREA =68.25
VF =0.20
VC =62.81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CUT AREA =331.05
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VC =322.11
STA =151+00
ORIGINAL EL =1065.07
DESIGN EL =1064.31
DESIGN EARTHWORK
FILL AREA =2.58
CUT AREA =207.30
VF =2.25
VC =201.72
STA =149+75
ORIGINAL EL =1067.50
DESIGN EL =1066.36
DESIGN EARTHWORK
FILL AREA =0.17
CUT AREA =364.71
VF =0.10
VC =322.77
STA =150+75
ORIGINAL EL =1065.65
DESIGN EL =1064.72
DESIGN EARTHWORK
FILL AREA =2.29
CUT AREA =228.40
VF =1.95
VC =220.42
STA =149+50
ORIGINAL EL =1068.13
DESIGN EL =1066.76
DESIGN EARTHWORK
FILL AREA =0.05
CUT AREA =332.48
VF =0.03
VC =280.78
STA =150+50
ORIGINAL EL =1066.13
DESIGN EL =1065.13
DESIGN EARTHWORK
FILL AREA =1.92
CUT AREA =247.70
VF =1.48
VC =266.45
STA =149+25
ORIGINAL EL =1067.78
DESIGN EL =1067.17
DESIGN EARTHWORK
FILL AREA =0.01
CUT AREA =274.02
VF =0.02
VC =192.54
STA =150+25
ORIGINAL EL =1066.86
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DESIGN EARTHWORK
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CUT AREA =327.83
VF =0.88
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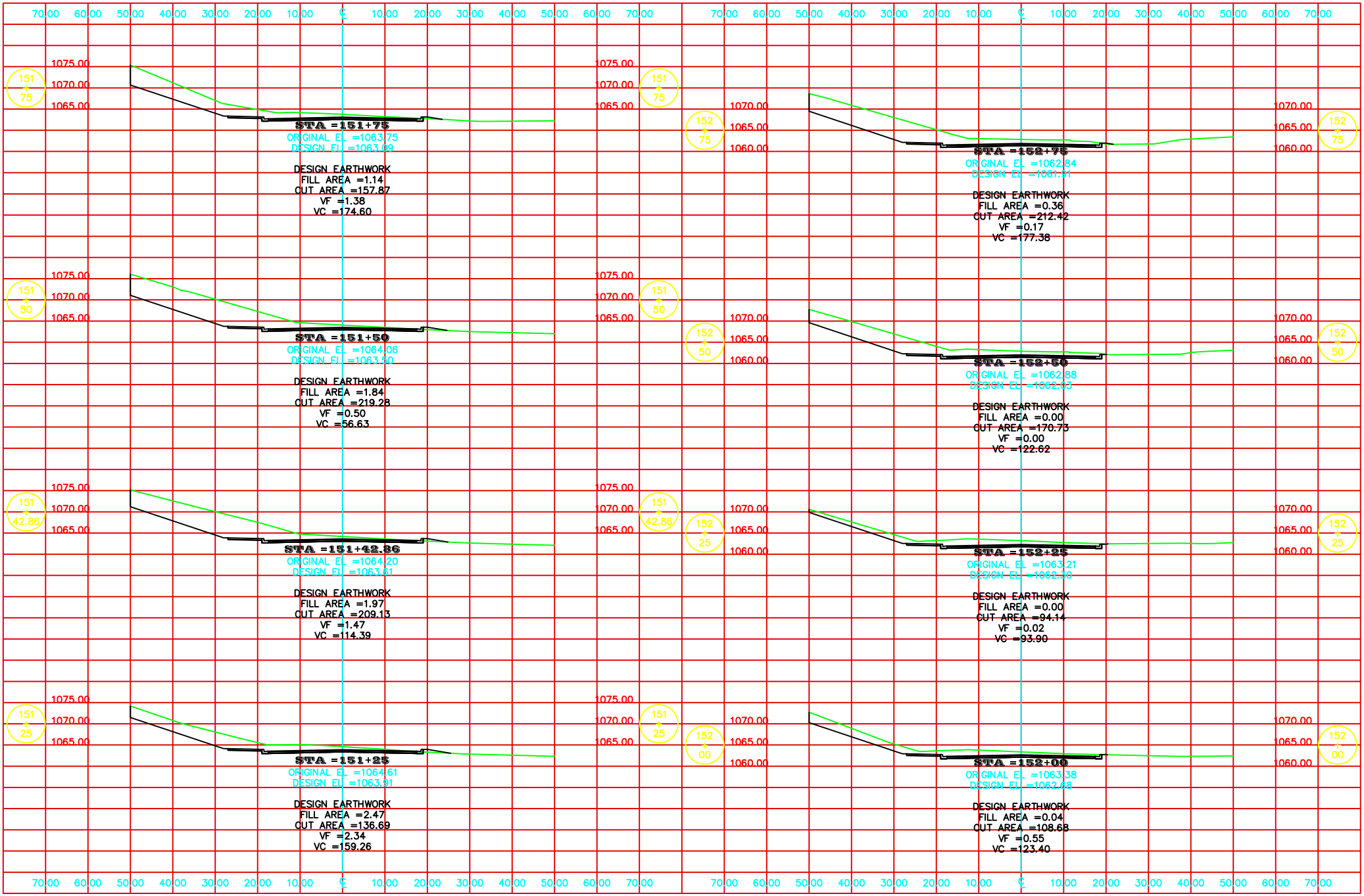
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DESIGN EARTHWORK
FILL AREA =1.14
CUT AREA =157.87
VF =1.38
VC =174.60
STA =151+50
ORIGINAL EL =1064.06
DESIGN EL =1063.50
DESIGN EARTHWORK
FILL AREA =1.84
CUT AREA =219.28
VF =0.50
VC =56.63
STA =151+42.86
ORIGINAL EL =1064.20
DESIGN EL =1063.61
DESIGN EARTHWORK
FILL AREA =1.97
CUT AREA =209.13
VF =1.47
VC =114.39
STA =151+25
ORIGINAL EL =1064.61
DESIGN EL =1063.91
DESIGN EARTHWORK
FILL AREA =2.47
CUT AREA =136.69
VF =2.34
VC =159.26
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ORIGINAL EL =1062.84
DESIGN EL =1061.31
DESIGN EARTHWORK
FILL AREA =0.36
CUT AREA =212.42
VF =0.17
VC =177.38
STA =152+50
ORIGINAL EL =1062.88
DESIGN EL =1062.03
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =170.73
VF =0.00
VC =122.62
STA =152+25
ORIGINAL EL =1063.21
DESIGN EL =1062.38
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =94.14
VF =0.02
VC =93.90
STA =152+00
ORIGINAL EL =1063.38
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DESIGN EARTHWORK
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CUT AREA =108.68
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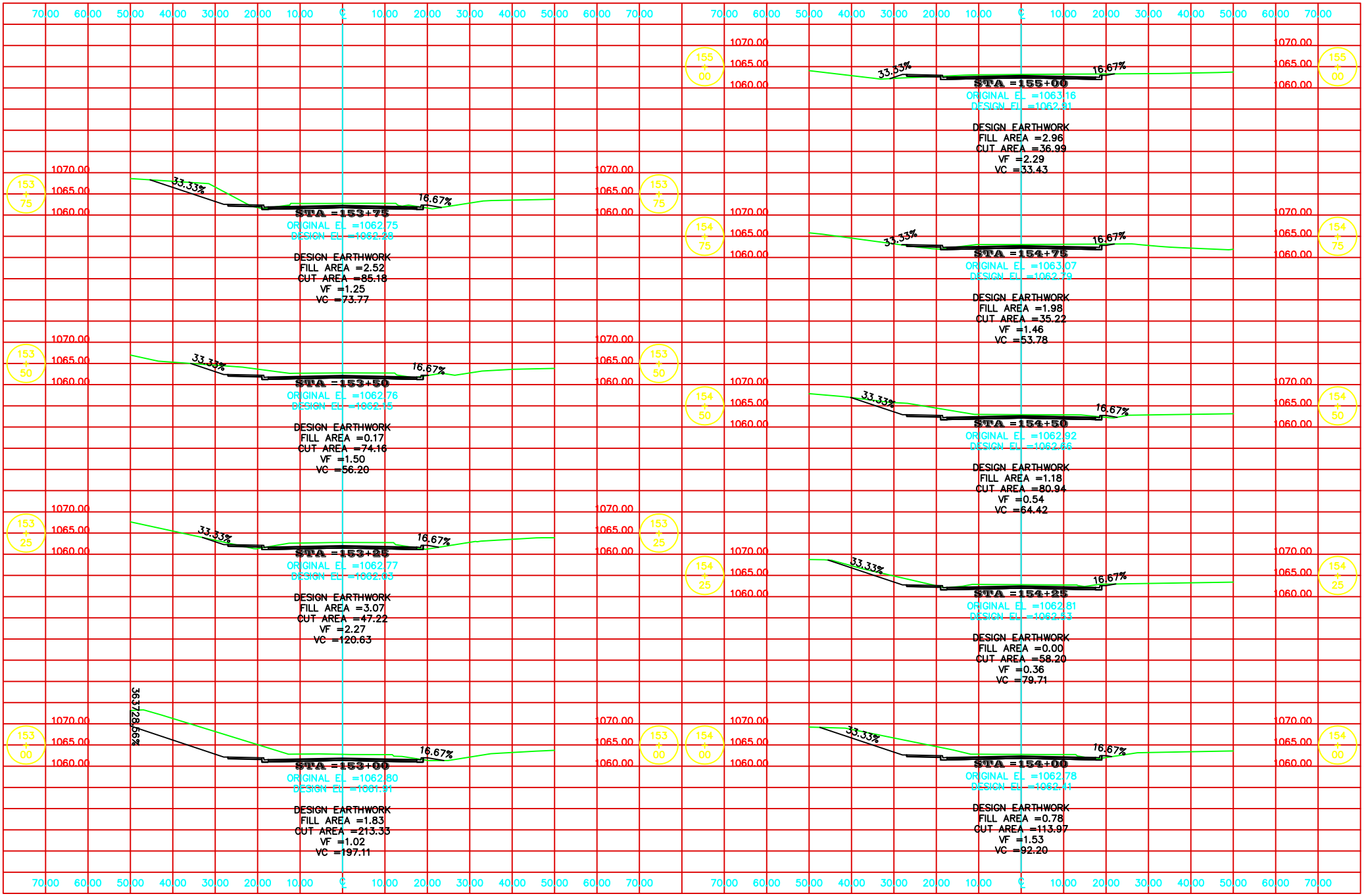
VC =123.40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STA =153+50
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DESIGN EARTHWORK
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DESIGN EL =1061.91
DESIGN EARTHWORK
FILL AREA =1.83
CUT AREA =213.33
VF =1.02
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STA =155+00
ORIGINAL EL =1063.16
DESIGN EL =1062.91
DESIGN EARTHWORK
FILL AREA =2.96
CUT AREA =36.99
VF =2.29
VC =33.43
STA =154+75
ORIGINAL EL =1063.07
DESIGN EL =1062.79
DESIGN EARTHWORK
FILL AREA =1.98
CUT AREA =35.22
VF =1.46
VC =53.78
STA =154+50
ORIGINAL EL =1062.92
DESIGN EL =1062.86
DESIGN EARTHWORK
FILL AREA =1.18
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VF =0.54
VC =64.42
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DESIGN EL =1062.83
DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =58.20
VF =0.36
VC =79.71
STA =154+00
ORIGINAL EL =1062.78
DESIGN EL =1062.91
DESIGN EARTHWORK
FILL AREA =0.78
CUT AREA =113.97
VF =1.53
VC =92.20
33.33%
16.67%
363728.56%
1070.00
1065.00
1060.00
153 + 75
153 + 50
153 + 25
153 + 00
155 + 00
154 + 75
154 + 50
154 + 25
154 + 00
70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

LEGEND

PROPOSED

- PROPOSED SAWCUT LINE
- WATER
- SAN. SEWER
- STORM SEWER
- REMOVE AND REPLACE CONCRETE
- DRIVEWAY
- WATER METER
- FIRE HYDRANT
- WATER VALVE
- SIGN
- MAIL BOX
- MANHOLE
- CATCH BASIN
- DRYWELL

CALL 2 DAYS
BEFORE YOU DIG
1-800-424-5555

EXISTING

- R/W
- PROPERTY LINE
- CENTER LINE
- EDGE OF ASPHALT
- EDGE OF GRAVEL
- EDGE OF CONCRETE
- WATER LINE
- SEWER
- STORM SEWER
- GAS LINE
- BURIED POWER
- OVERHEAD POWER
- BURIED PHONE
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- STREET LIGHT
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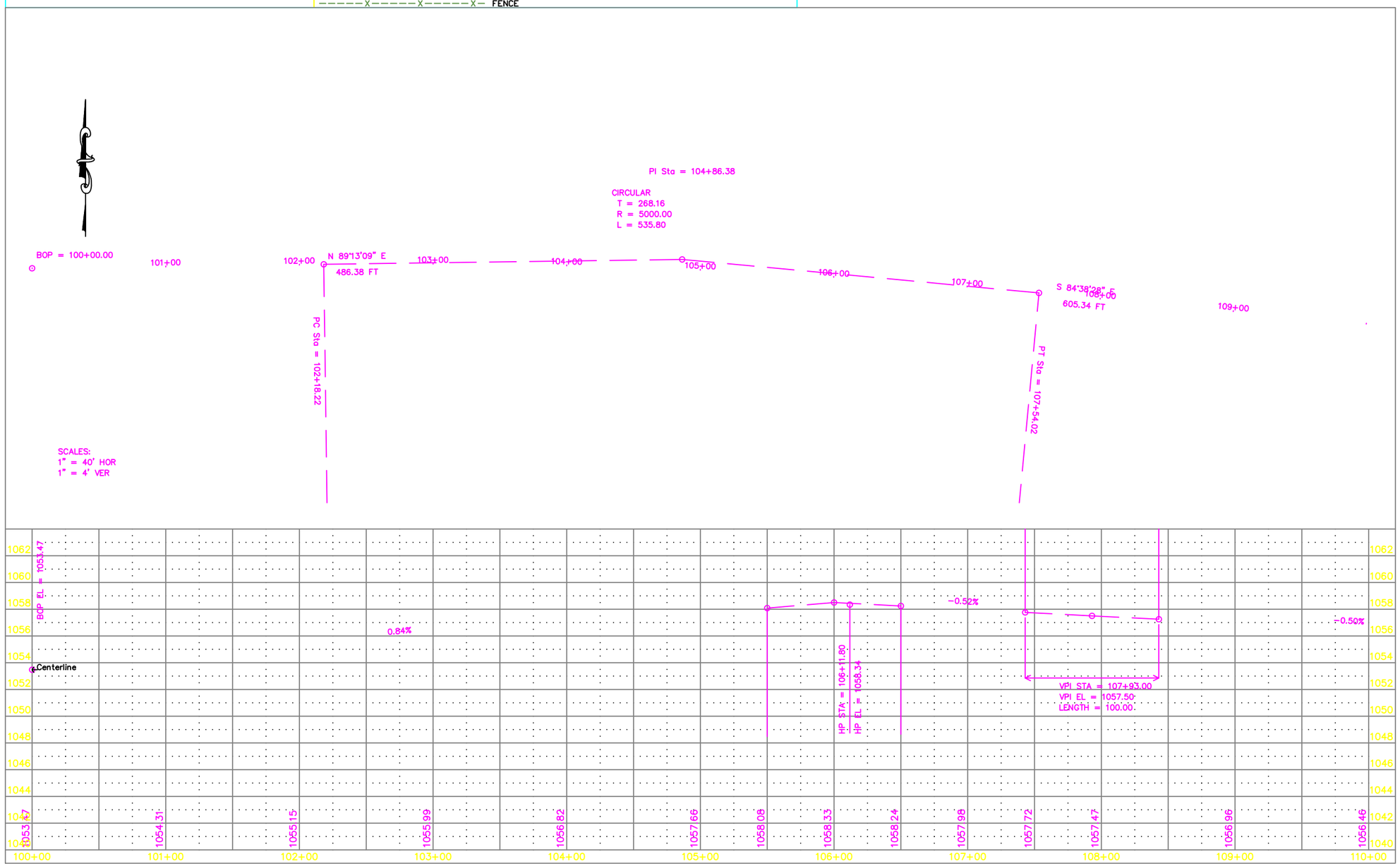

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SCALE IN FEET PLAN VIEW ONLY

JEFFREY MCFAUL
STATE OF WASHINGTON
22625
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 3/7/

REVISION	INIT	DATE

MUNICIPAL SERVICES DEPT. - ENGINEERING DIVISION
CITY OF MOSES LAKE
GRANT COUNTY
WASHINGTON

WANAPUM BIKE PATH PROJECT - 2006
STA:

JRC	DRAWN
XXX	CHECK
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2/2006	DATE
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X-XXX	FILE NO.

SURVEY: DBT
INST: TRIMBLE 5700 GPS & SOKKIA SET 3BII
DATE OF SURVEY: FEB 2006
SOFTWARE: AUTOCAD R2006

LEGEND

PROPOSED

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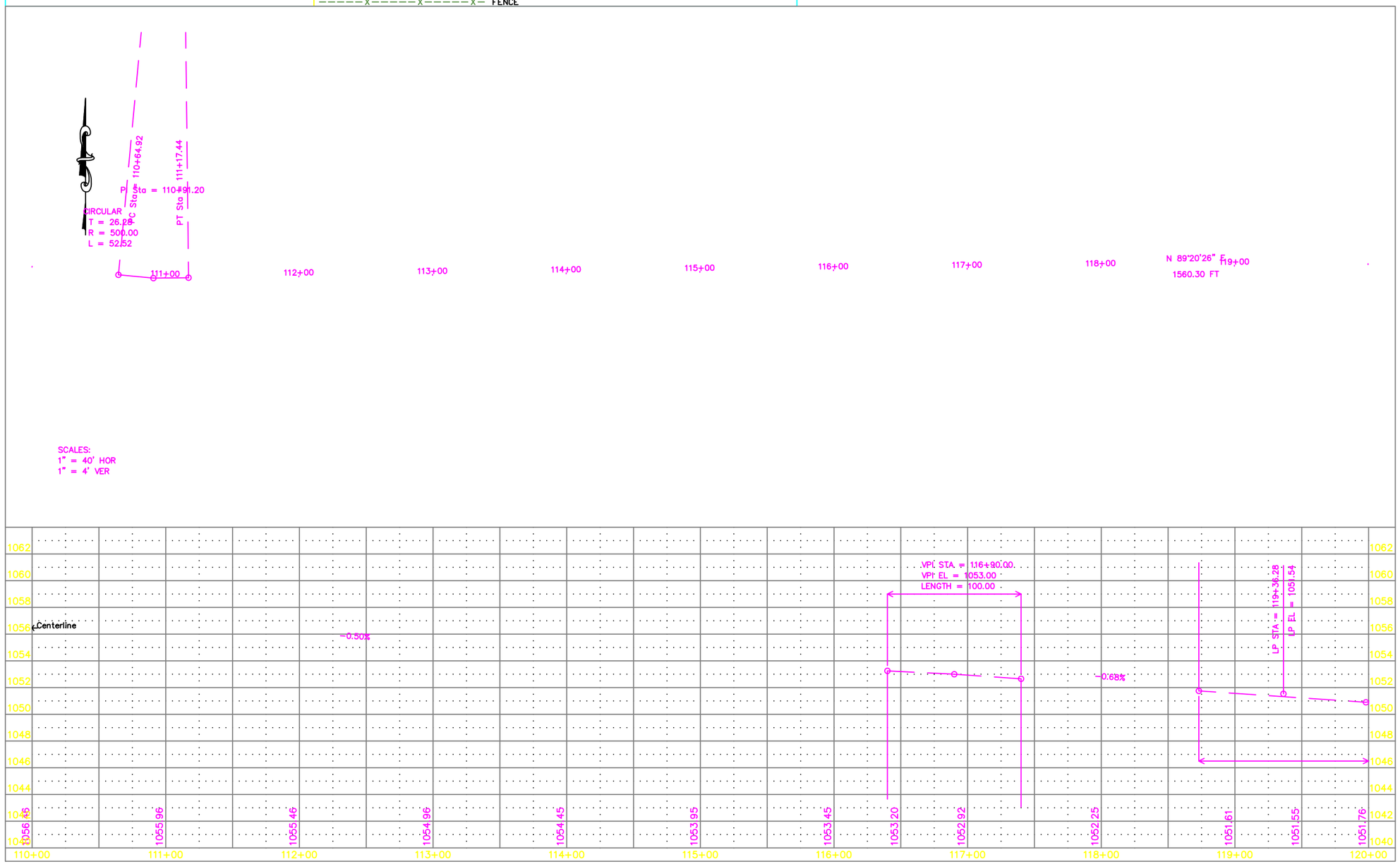

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GERRY MCFAUL STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
EXPIRES 3/7/

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MUNICIPAL SERVICES DEPT. – ENGINEERING DIVISION
CITY OF MOSES LAKE
GRANT COUNTY WASHINGTON

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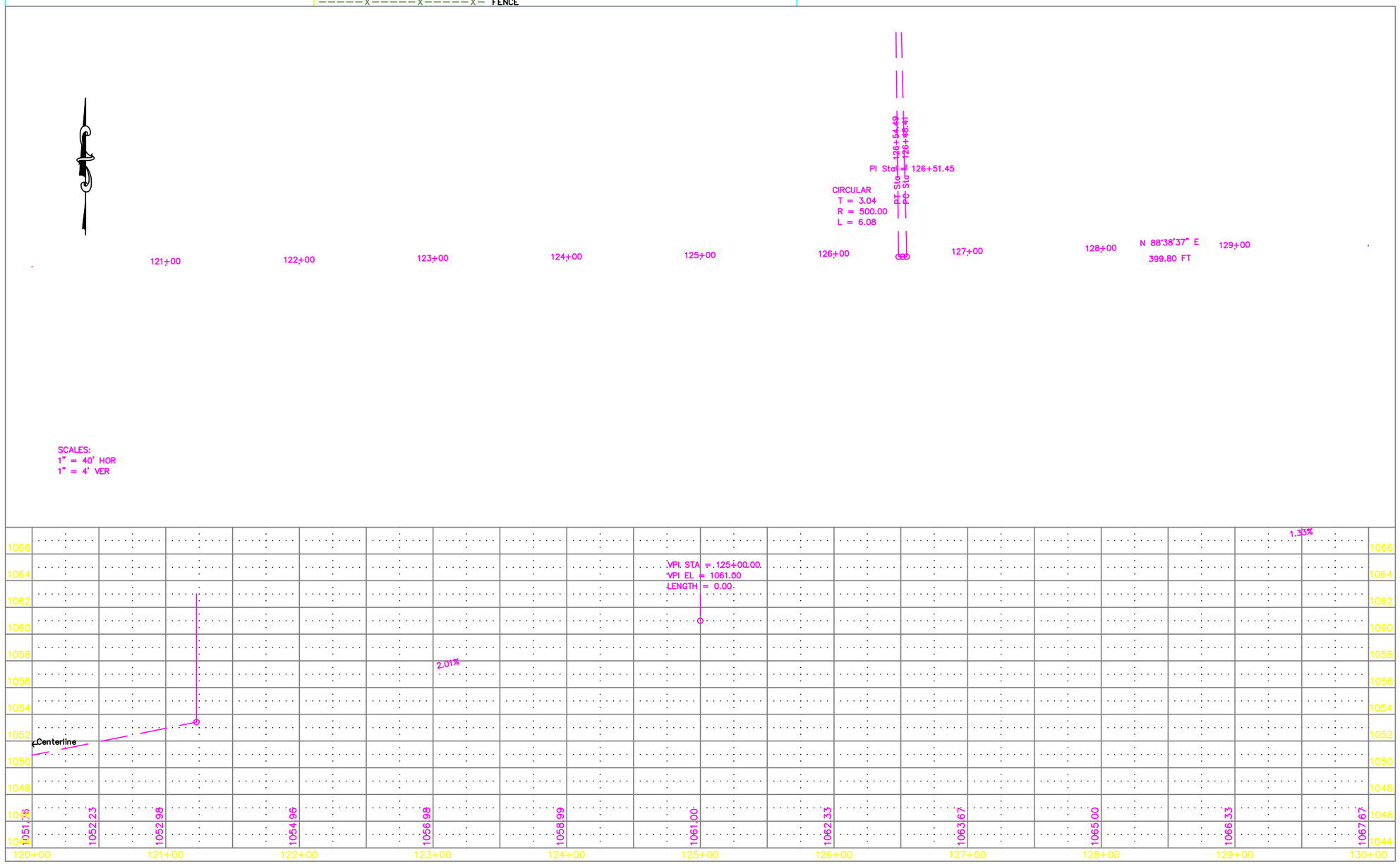

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STEVEN J. McCAUL
STATE OF WASHINGTON
PROFESSIONAL ENGINEER
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CITY OF MOSES LAKE
GRANT COUNTY WASHINGTON

WANAPUM BIKE PATH PROJECT - 2006
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DATE

SHEET XX
OF XX

X-XXX
FILE NO.

SURVEY: DBT
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& SOKKIA SET 3BII
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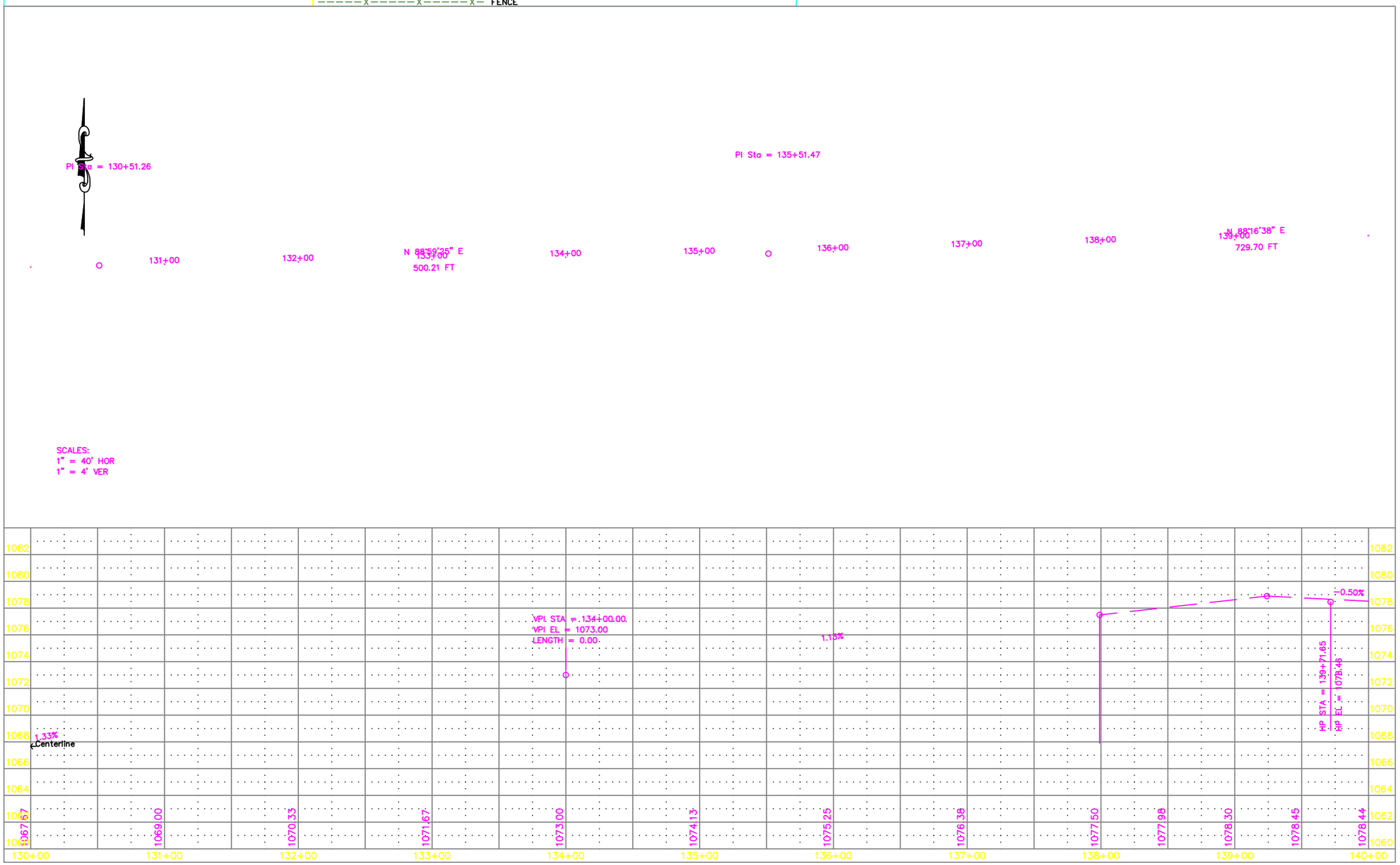

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JEFFREY MCCAUL STATE OF WASHINGTON 35 PROFESSIONAL ENGINEER
EXPIRES 3/7/

REVISION	INIT	DATE

MUNICIPAL SERVICES DEPT. - ENGINEERING DIVISION
CITY OF MOSES LAKE
GRANT COUNTY WASHINGTON

WANAPUM BIKE PATH PROJECT - 2006
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2/2006	DATE
SHEET XX OF XX	
X-XXX	FILE NO.

SURVEY: DBT
INST: TRIMBLE 5700 GPS & SOKKIA SET 3BII
DATE OF SURVEY: FEB 2006
SOFTWARE: AUTOCAD R2006

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STEVEN J. GERRY MCFAUL
STATE OF WASHINGTON
PROFESSIONAL ENGINEER
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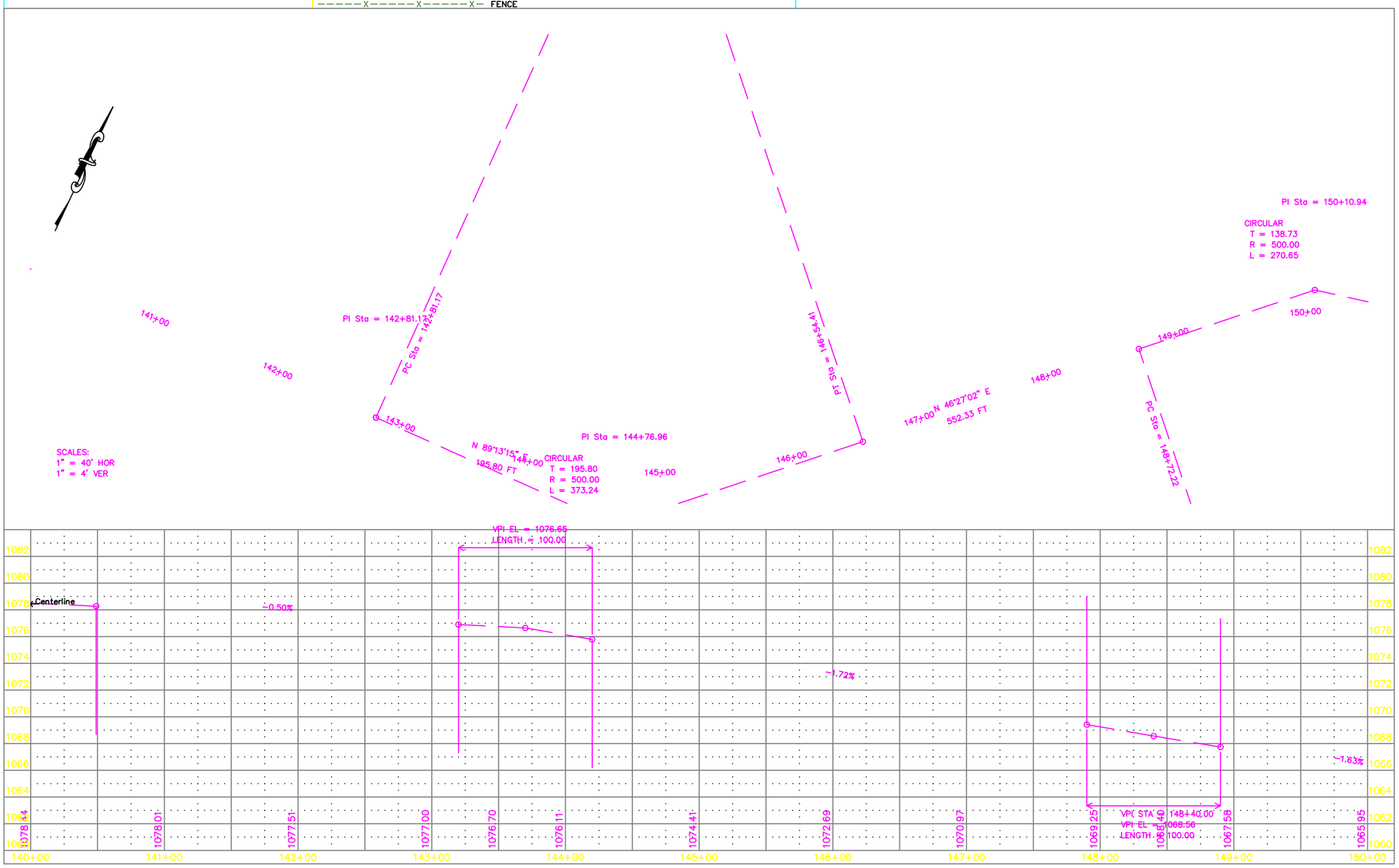

REVISION	DATE	INIT

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CITY OF MOSES LAKE
GRANT COUNTY WASHINGTON

WANAPUM BIKE PATH PROJECT - 2006
STA:

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2/2006	DATE
SHEET XX OF XX	
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INST: TRIMBLE 5700 GPS & SOKKIA SET 3BII
DATE OF SURVEY: FEB 2006
SOFTWARE: AUTOCAD R2006

LEGEND

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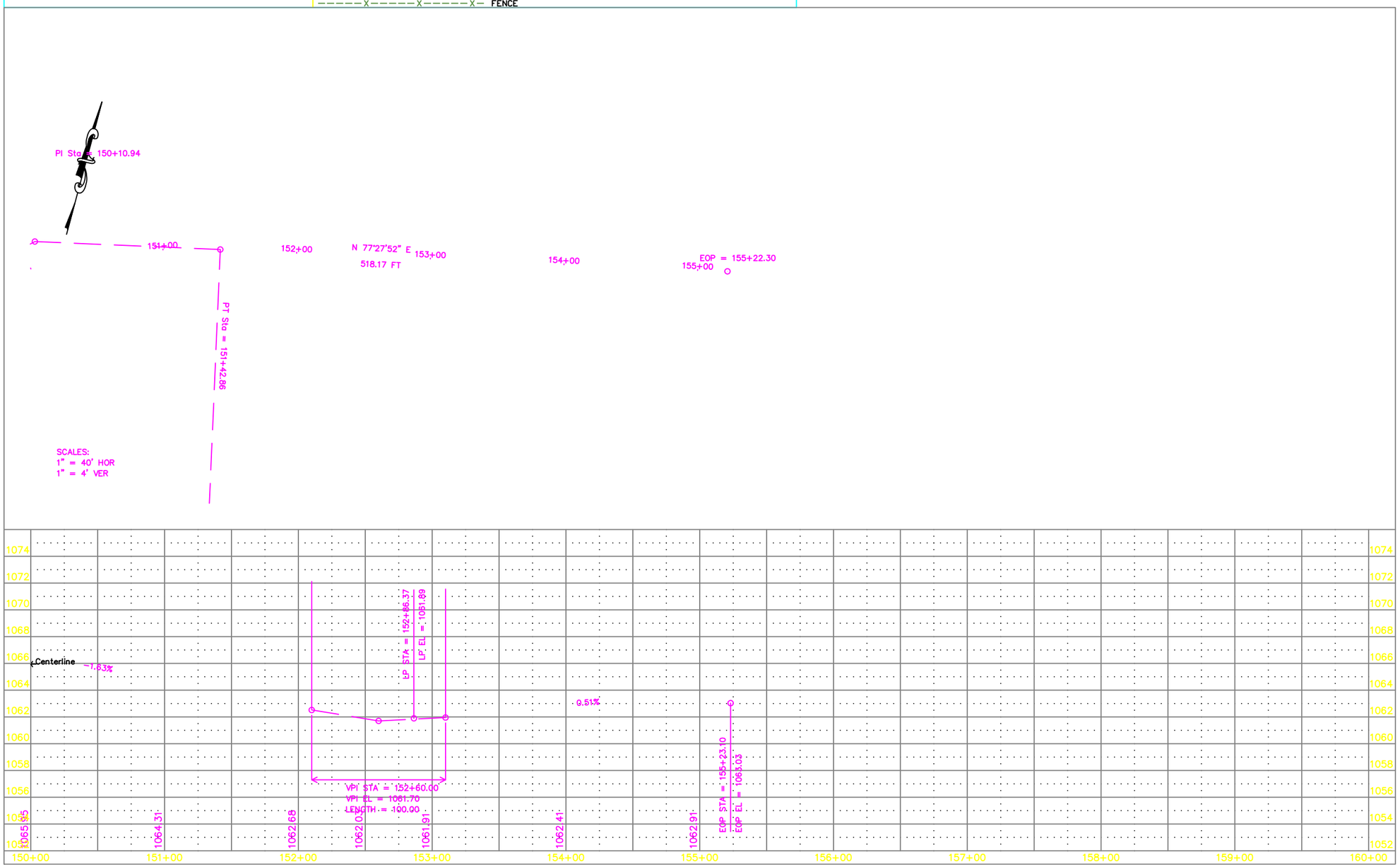

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GERRY MCCAUL
STATE OF WASHINGTON
35
PROFESSIONAL ENGINEER
EXPIRES 3/7/

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CITY OF MOSES LAKE
GRANT COUNTY WASHINGTON

WANAPUM BIKE PATH PROJECT - 2006
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2/2006	DATE
SHEET XX OF XX	
X-XXX	FILE NO.

SURVEY: DBT
INST: TRIMBLE 5700 GPS & SOKKIA SET 3BII
DATE OF SURVEY: FEB 2006
SOFTWARE: AUTOCAD R2006

ROADCALC DESIGN EARTHWORK - RAW VOLUMES

STATION	MATERIAL	CUT AREA (FT^2)	CUT VOLUME (yd^3)	FILL AREA (FT^2)	FILL VOLUME (yd^3)
107+54.02	Orig_Surface	14.28	0.00		
	Total	14.28	0.00	8.35	0.00
107+75.00	Orig_Surface	11.41	9.98		
	Total	11.41	9.98	15.96	9.44
108+00.00	Orig_Surface	14.08	11.80		
	Total	14.08	11.80	11.54	12.73
108+25.00	Orig_Surface	14.05	13.02		
	Total	14.05	13.02	16.63	13.04
108+50.00	Orig_Surface	11.03	11.61		
	Total	11.03	11.61	11.46	13.00
108+75.00	Orig_Surface	8.02	8.82		
	Total	8.02	8.82	20.81	14.94
109+00.00	Orig_Surface	9.67	8.19		
	Total	9.67	8.19	36.79	26.67
109+25.00	Orig_Surface	13.28	10.63		
	Total	13.28	10.63	38.01	34.63
109+50.00	Orig_Surface	16.19	13.65		
	Total	16.19	13.65	37.05	34.75
109+75.00	Orig_Surface	19.06	16.32		
	Total	19.06	16.32	26.09	29.23
110+00.00	Orig_Surface	20.93	18.52		
	Total	20.93	18.52	16.43	19.69
110+25.00	Orig_Surface	20.73	19.29		
	Total	20.73	19.29	13.11	13.68
110+50.00	Orig_Surface	20.65	19.16		
	Total	20.65	19.16	10.62	10.98
110+64.92	Orig_Surface	20.05	11.24		
	Total	20.05	11.24	9.49	5.55
110+75.00	Orig_Surface	19.30	7.41		
	Total	19.30	7.41	10.03	3.48

ML_quantities

STATION	MATERIAL	CUT AREA (FT^2)	CUT VOLUME (yd^3)	FILL AREA (FT^2)	FILL VOLUME (yd^3)
111+00.00	Orig_Surface	16.68	16.84		
	Total	16.68	16.84	9.26	8.58
111+17.44	Orig_Surface	14.29	10.15		
	Total	14.29	10.15	9.85	5.93
111+25.00	Orig_Surface	13.93	3.95		
	Total	13.93	3.95	10.62	2.87
111+50.00	Orig_Surface	19.88	15.65		
	Total	19.88	15.65	2.38	6.02
111+75.00	Orig_Surface	23.28	19.98		
	Total	23.28	19.98	0.93	1.53
112+00.00	Orig_Surface	22.68	21.28		
	Total	22.68	21.28	0.51	0.66
112+25.00	Orig_Surface	15.59	17.72		
	Total	15.59	17.72	4.84	2.47
112+50.00	Orig_Surface	22.71	17.73		
	Total	22.71	17.73	0.55	2.49
112+75.00	Orig_Surface	26.64	22.85		
	Total	26.64	22.85	0.33	0.41
113+00.00	Orig_Surface	19.95	21.57		
	Total	19.95	21.57	1.42	0.81
113+25.00	Orig_Surface	16.39	16.82		
	Total	16.39	16.82	4.91	2.93
113+50.00	Orig_Surface	17.78	15.82		
	Total	17.78	15.82	4.43	4.32
113+75.00	Orig_Surface	19.95	17.47		
	Total	19.95	17.47	3.15	3.51
114+00.00	Orig_Surface	13.63	15.55		
	Total	13.63	15.55	4.65	3.61
114+25.00	Orig_Surface	10.07	10.97		
	Total	10.07	10.97	9.35	6.48

User Name: rgraffe
Project: Frontage design
Subproject: design, 001

Date: 06-07-11
Time: 14:42:02
Page: 3

ROADCALC DESIGN EARTHWORK - RAW VOLUMES

STATION	MATERIAL	CUT AREA (FT^2)	CUT VOLUME (yd^3)	FILL AREA (FT^2)	FILL VOLUME (yd^3)
114+50.00	Orig_Surface	11.37	9.92		

	Total	11.37	9.92	9.22	8.59
114+75.00	Orig_Surface	10.74	10.24		
	Total	10.74	10.24	8.22	8.07
115+00.00	Orig_Surface	23.96	16.06		
	Total	23.96	16.06	2.51	4.97
115+25.00	Orig_Surface	18.30	19.56		
	Total	18.30	19.56	2.49	2.32
115+50.00	Orig_Surface	18.47	17.02		
	Total	18.47	17.02	3.64	2.84
115+75.00	Orig_Surface	18.25	17.00		
	Total	18.25	17.00	4.55	3.79
116+00.00	Orig_Surface	17.87	16.72		
	Total	17.87	16.72	2.37	3.20
116+25.00	Orig_Surface	18.21	16.70		
	Total	18.21	16.70	7.16	4.41
116+50.00	Orig_Surface	20.64	17.98		
	Total	20.64	17.98	6.96	6.54
116+75.00	Orig_Surface	11.95	15.09		
	Total	11.95	15.09	9.90	7.81
117+00.00	Orig_Surface	10.37	10.33		
	Total	10.37	10.33	13.14	10.67
117+25.00	Orig_Surface	17.12	12.72		
	Total	17.12	12.72	6.54	9.11
117+50.00	Orig_Surface	16.72	15.67		
	Total	16.72	15.67	9.34	7.35
117+75.00	Orig_Surface	21.45	17.67		
	Total	21.45	17.67	8.12	8.08
118+00.00	Orig_Surface	25.48	21.73		
	Total	25.48	21.73	28.86	17.12

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ROADCALC DESIGN EARTHWORK - RAW VOLUMES

STATION	MATERIAL	CUT AREA (FT^2)	CUT VOLUME (yd^3)	FILL AREA (FT^2)	FILL VOLUME (yd^3)
118+25.00	Orig_Surface	30.51	25.92		
	Total	30.51	25.92	41.40	32.53
118+50.00	Orig_Surface	34.30	30.00		
	Total	34.30	30.00	45.42	40.19

118+75.00	Orig_Surface	44.74	36.59		
	Total	44.74	36.59	24.34	32.30
119+00.00	Orig_Surface	53.93	45.68		
	Total	53.93	45.68	24.26	22.50
119+25.00	Orig_Surface	61.36	53.38		
	Total	61.36	53.38	25.60	23.09
119+50.00	Orig_Surface	66.61	59.24		
	Total	66.61	59.24	29.39	25.46
119+75.00	Orig_Surface	70.03	63.26		
	Total	70.03	63.26	35.96	30.26
120+00.00	Orig_Surface	70.80	65.20		
	Total	70.80	65.20	44.34	37.18
120+25.00	Orig_Surface	68.96	64.70		
	Total	68.96	64.70	41.90	39.93
120+50.00	Orig_Surface	68.05	63.43		
	Total	68.05	63.43	26.34	31.59
120+75.00	Orig_Surface	74.81	66.14		
	Total	74.81	66.14	14.50	18.91
121+00.00	Orig_Surface	90.54	76.55		
	Total	90.54	76.55	2.69	7.96
121+25.00	Orig_Surface	104.74	90.41		
	Total	104.74	90.41	0.00	1.25
121+50.00	Orig_Surface	113.92	101.23		
	Total	113.92	101.23	0.00	0.00
121+75.00	Orig_Surface	96.27	97.31		
	Total	96.27	97.31	0.00	0.00

ROADCALC DESIGN EARTHWORK - RAW VOLUMES

STATION	MATERIAL	CUT AREA (FT^2)	CUT VOLUME (yd^3)	FILL AREA (FT^2)	FILL VOLUME (yd^3)
122+00.00	Orig_Surface	62.05	73.30		
	Total	62.05	73.30	0.00	0.00
122+25.00	Orig_Surface	53.92	53.69		
	Total	53.92	53.69	1.03	0.48
122+50.00	Orig_Surface	47.17	46.80		
	Total	47.17	46.80	1.83	1.32
122+75.00	Orig_Surface	40.95	40.80		
	Total	40.95	40.80	3.06	2.26

123+00.00	Orig_Surface	35.30	35.30		
	Total	35.30	35.30	4.70	3.59
123+25.00	Orig_Surface	29.88	30.18		
	Total	29.88	30.18	6.51	5.19
123+50.00	Orig_Surface	24.61	25.23		
	Total	24.61	25.23	8.39	6.90
123+75.00	Orig_Surface	19.25	20.31		
	Total	19.25	20.31	20.50	13.37
124+00.00	Orig_Surface	11.94	14.44		
	Total	11.94	14.44	44.25	29.97
124+25.00	Orig_Surface	8.88	9.64		
	Total	8.88	9.64	45.68	41.63
124+50.00	Orig_Surface	8.35	7.98		
	Total	8.35	7.98	43.46	41.27
124+75.00	Orig_Surface	4.95	6.16		
	Total	4.95	6.16	40.36	38.81
125+00.00	Orig_Surface	2.13	3.27		
	Total	2.13	3.27	36.50	35.58
125+25.00	Orig_Surface	2.99	2.37		
	Total	2.99	2.37	52.35	41.13
125+50.00	Orig_Surface	5.39	3.88		
	Total	5.39	3.88	68.41	55.91

ROADCALC DESIGN EARTHWORK - RAW VOLUMES

STATION	MATERIAL	CUT AREA (FT^2)	CUT VOLUME (yd^3)	FILL AREA (FT^2)	FILL VOLUME (yd^3)
125+75.00	Orig_Surface	5.74	5.15		
	Total	5.74	5.15	86.02	71.50
126+00.00	Orig_Surface	6.31	5.58		
	Total	6.31	5.58	105.02	88.44
126+25.00	Orig_Surface	7.06	6.19		
	Total	7.06	6.19	124.25	106.14
126+48.41	Orig_Surface	7.86	6.47		
	Total	7.86	6.47	136.54	113.06
126+50.00	Orig_Surface	7.93	0.48		
	Total	7.93	0.48	136.94	7.67
126+54.49	Orig_Surface	8.13	1.37		

	Total	8.13	1.37	138.22	21.82
126+75.00	Orig_Surface	8.98	6.50		
	Total	8.98	6.50	144.61	107.40
127+00.00	Orig_Surface	10.19	8.87		
	Total	10.19	8.87	152.84	137.71
127+25.00	Orig_Surface	11.37	9.98		
	Total	11.37	9.98	162.10	145.81
127+50.00	Orig_Surface	12.45	11.03		
	Total	12.45	11.03	148.34	143.72
127+75.00	Orig_Surface	13.06	11.81		
	Total	13.06	11.81	133.83	130.64
128+00.00	Orig_Surface	13.53	12.31		
	Total	13.53	12.31	119.43	117.25
128+25.00	Orig_Surface	13.95	12.72		
	Total	13.95	12.72	106.78	104.72
128+50.00	Orig_Surface	14.31	13.09		
	Total	14.31	13.09	95.95	93.85
128+75.00	Orig_Surface	14.53	13.36		
	Total	14.53	13.36	88.21	85.26

ROADCALC DESIGN EARTHWORK - RAW VOLUMES

STATION	MATERIAL	CUT AREA (FT^2)	CUT VOLUME (yd^3)	FILL AREA (FT^2)	FILL VOLUME (yd^3)
129+00.00	Orig_Surface	14.68	13.53		
	Total	14.68	13.53	82.27	78.93
129+25.00	Orig_Surface	14.86	13.68		
	Total	14.86	13.68	47.94	60.28
129+50.00	Orig_Surface	20.86	16.54		
	Total	20.86	16.54	12.25	27.86
129+75.00	Orig_Surface	31.55	24.27		
	Total	31.55	24.27	4.56	7.78
130+00.00	Orig_Surface	39.53	32.91		
	Total	39.53	32.91	0.52	2.35
130+25.00	Orig_Surface	43.90	38.63		
	Total	43.90	38.63	0.00	0.24
130+50.00	Orig_Surface	43.80	40.60		
	Total	43.80	40.60	0.00	0.00

130+51.26	Orig_Surface	43.76	2.04		
	Total	43.76	2.04	0.00	0.00
130+75.00	Orig_Surface	43.96	38.57		
	Total	43.96	38.57	0.00	0.00
131+00.00	Orig_Surface	47.93	42.54		
	Total	47.93	42.54	0.00	0.00
131+25.00	Orig_Surface	51.66	46.11		
	Total	51.66	46.11	0.00	0.00
131+50.00	Orig_Surface	54.47	49.14		
	Total	54.47	49.14	0.00	0.00
131+75.00	Orig_Surface	59.52	52.78		
	Total	59.52	52.78	0.00	0.00
132+00.00	Orig_Surface	68.18	59.12		
	Total	68.18	59.12	0.00	0.00
132+25.00	Orig_Surface	77.40	67.40		
	Total	77.40	67.40	0.00	0.00

ROADCALC DESIGN EARTHWORK - RAW VOLUMES

STATION	MATERIAL	CUT AREA (FT^2)	CUT VOLUME (yd^3)	FILL AREA (FT^2)	FILL VOLUME (yd^3)
132+50.00	Orig_Surface	86.98	76.10		
	Total	86.98	76.10	0.00	0.00
132+75.00	Orig_Surface	84.35	79.32		
	Total	84.35	79.32	0.00	0.00
133+00.00	Orig_Surface	79.10	75.67		
	Total	79.10	75.67	0.00	0.00
133+25.00	Orig_Surface	97.42	81.72		
	Total	97.42	81.72	0.00	0.00
133+50.00	Orig_Surface	112.91	97.38		
	Total	112.91	97.38	0.00	0.00
133+75.00	Orig_Surface	112.25	104.24		
	Total	112.25	104.24	0.00	0.00
134+00.00	Orig_Surface	102.05	99.21		
	Total	102.05	99.21	0.00	0.00
134+25.00	Orig_Surface	84.75	86.48		
	Total	84.75	86.48	0.00	0.00
134+50.00	Orig_Surface	64.66	69.17		
	Total	64.66	69.17	0.00	0.00

134+75.00	Orig_Surface	56.69	56.18		
	Total	56.69	56.18	0.00	0.00
135+00.00	Orig_Surface	47.36	48.17		
	Total	47.36	48.17	3.39	1.57
135+25.00	Orig_Surface	48.93	44.58		
	Total	48.93	44.58	9.05	5.76
135+50.00	Orig_Surface	54.90	48.07		
	Total	54.90	48.07	16.31	11.74
135+51.47	Orig_Surface	55.30	3.00		
	Total	55.30	3.00	16.63	0.90
135+75.00	Orig_Surface	62.02	51.13		
	Total	62.02	51.13	18.97	15.51

ROADCALC DESIGN EARTHWORK - RAW VOLUMES

STATION	MATERIAL	CUT AREA (FT^2)	CUT VOLUME (yd^3)	FILL AREA (FT^2)	FILL VOLUME (yd^3)
136+00.00	Orig_Surface	69.83	61.04		
	Total	69.83	61.04	15.74	16.07
136+25.00	Orig_Surface	77.34	68.14		
	Total	77.34	68.14	11.48	12.60
136+50.00	Orig_Surface	85.81	75.53		
	Total	85.81	75.53	9.07	9.51
136+75.00	Orig_Surface	84.36	78.79		
	Total	84.36	78.79	35.02	20.41
137+00.00	Orig_Surface	93.72	82.44		
	Total	93.72	82.44	16.12	23.67
137+25.00	Orig_Surface	99.22	89.32		
	Total	99.22	89.32	2.91	8.81
137+50.00	Orig_Surface	104.60	94.36		
	Total	104.60	94.36	1.71	2.14
137+75.00	Orig_Surface	100.20	94.81		
	Total	100.20	94.81	18.09	9.17
138+00.00	Orig_Surface	88.76	87.48		
	Total	88.76	87.48	20.57	17.90
138+25.00	Orig_Surface	103.60	89.06		
	Total	103.60	89.06	0.29	9.66
138+50.00	Orig_Surface	103.23	95.76		

	Total	103.23	95.76	0.00	0.14
138+75.00	Orig_Surface	95.56	92.03		
	Total	95.56	92.03	20.51	9.50
139+00.00	Orig_Surface	92.62	87.12		
	Total	92.62	87.12	42.93	29.37
139+25.00	Orig_Surface	99.27	88.84		
	Total	99.27	88.84	0.00	19.87
139+50.00	Orig_Surface	94.77	89.83		
	Total	94.77	89.83	21.25	9.84

ROADCALC DESIGN EARTHWORK - RAW VOLUMES

STATION	MATERIAL	CUT AREA (FT^2)	CUT VOLUME (yd^3)	FILL AREA (FT^2)	FILL VOLUME (yd^3)
139+75.00	Orig_Surface	104.69	92.34		
	Total	104.69	92.34	0.00	9.84
140+00.00	Orig_Surface	115.30	101.84		
	Total	115.30	101.84	0.00	0.00
140+25.00	Orig_Surface	125.45	111.46		
	Total	125.45	111.46	0.00	0.00
140+50.00	Orig_Surface	112.28	110.06		
	Total	112.28	110.06	0.00	0.00
140+75.00	Orig_Surface	117.11	106.20		
	Total	117.11	106.20	30.29	14.02
141+00.00	Orig_Surface	127.82	113.40		
	Total	127.82	113.40	0.00	14.02
141+25.00	Orig_Surface	133.40	120.94		
	Total	133.40	120.94	0.00	0.00
141+50.00	Orig_Surface	141.36	127.20		
	Total	141.36	127.20	0.00	0.00
141+75.00	Orig_Surface	138.50	129.56		
	Total	138.50	129.56	0.00	0.00
142+00.00	Orig_Surface	133.37	125.86		
	Total	133.37	125.86	0.00	0.00
142+25.00	Orig_Surface	128.27	121.13		
	Total	128.27	121.13	0.00	0.00
142+50.00	Orig_Surface	121.79	115.77		
	Total	121.79	115.77	0.00	0.00

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142+75.00	Orig_Surface	111.07	107.81		
	Total	111.07	107.81	0.00	0.00
Total	Orig_Surface	7138.88	6412.08		
	Total	7138.88	6412.08	3542.67	2984.33

ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
107+54.02	acp	7.29	0.00	0.00	0.00
	cstc	11.66	0.00	0.00	0.00
	curb	2.06	0.00	0.00	0.00
	sidewalk	2.66	0.00	0.00	0.00
	maintenance	0.67	0.00	0.00	0.00
	Total	24.34	0.00	0.00	0.00
107+75.00	acp	7.29	5.66	5.66	5.66
	cstc	11.66	9.06	9.06	9.06
	curb	2.06	1.60	1.60	1.60
	sidewalk	2.66	2.07	2.07	2.07
	maintenance	0.67	0.52	0.52	0.52
	Total	24.34	18.91	18.91	18.91
108+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
108+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
108+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
108+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
109+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
109+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
109+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
109+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
110+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
110+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
110+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

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ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)

110+64.92	acp	7.29	4.03	4.03	4.03
	cstc	11.66	6.44	6.44	6.44
	curb	2.06	1.14	1.14	1.14
	sidewalk	2.66	1.47	1.47	1.47
	maintenance	0.67	0.37	0.37	0.37
	Total	24.34	13.45	13.45	13.45
110+75.00	acp	7.29	2.72	2.72	2.72
	cstc	11.66	4.35	4.35	4.35
	curb	2.06	0.77	0.77	0.77
	sidewalk	2.66	0.95	0.95	0.95
	maintenance	0.67	0.24	0.24	0.24
	Total	24.34	9.03	9.03	9.03
111+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.35	2.35	2.35
	maintenance	0.67	0.59	0.59	0.59
	Total	24.34	22.40	22.40	22.40
111+17.44	acp	7.29	4.71	4.71	4.71
	cstc	11.66	7.53	7.53	7.53
	curb	2.06	1.33	1.33	1.33
	sidewalk	2.66	1.64	1.64	1.64
	maintenance	0.67	0.41	0.41	0.41
	Total	24.34	15.62	15.62	15.62
111+25.00	acp	7.29	2.04	2.04	2.04
	cstc	11.66	3.26	3.26	3.26
	curb	2.06	0.58	0.58	0.58
	sidewalk	2.66	0.75	0.75	0.75
	maintenance	0.67	0.19	0.19	0.19
	Total	24.34	6.82	6.82	6.82
111+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
111+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79

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ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
112+00.00	acp	7.29	6.75	6.75	6.75

	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
112+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
112+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
112+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
113+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
113+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62

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ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	Total	24.34	22.54	22.54	22.54
113+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
113+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79

	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
114+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
114+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
114+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
114+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
115+00.00	acp	7.29	6.75	6.75	6.75

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ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
115+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
115+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91

	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
115+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
116+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
116+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
116+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47

ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
116+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
117+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
117+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47

	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
117+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
117+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
118+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

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STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
118+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
118+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
118+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
119+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62

	Total	24.34	22.54	22.54	22.54
119+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
119+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
119+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91

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ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
120+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
120+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
120+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
120+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

121+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
121+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
121+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
121+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
122+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
122+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
122+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

122+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
123+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79

ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
123+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
123+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
123+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
124+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
124+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
124+50.00	acp	7.29	6.75	6.75	6.75

cstc	11.66	10.79	10.79	10.79
curb	2.06	1.91	1.91	1.91
sidewalk	2.66	2.47	2.47	2.47
maintenance	0.67	0.62	0.62	0.62

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ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	Total	24.34	22.54	22.54	22.54
124+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
125+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
125+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
125+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
125+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
126+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
126+25.00	acp	7.29	6.75	6.75	6.75

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ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
126+48.41	acp	7.29	6.32	6.32	6.32
	cstc	11.66	10.11	10.11	10.11
	curb	2.06	1.79	1.79	1.79
	sidewalk	2.66	2.31	2.31	2.31
	maintenance	0.67	0.58	0.58	0.58
	Total	24.34	21.11	21.11	21.11
126+50.00	acp	7.29	0.43	0.43	0.43
	cstc	11.66	0.69	0.69	0.69
	curb	2.06	0.12	0.12	0.12
	sidewalk	2.66	0.15	0.15	0.15
	maintenance	0.67	0.04	0.04	0.04
	Total	24.34	1.42	1.42	1.42
126+54.49	acp	7.29	1.21	1.21	1.21
	cstc	11.66	1.94	1.94	1.94
	curb	2.06	0.34	0.34	0.34
	sidewalk	2.66	0.42	0.42	0.42
	maintenance	0.67	0.11	0.11	0.11
	Total	24.34	4.03	4.03	4.03
126+75.00	acp	7.29	5.54	5.54	5.54
	cstc	11.66	8.85	8.85	8.85
	curb	2.06	1.57	1.57	1.57
	sidewalk	2.66	2.02	2.02	2.02
	maintenance	0.67	0.51	0.51	0.51
	Total	24.34	18.49	18.49	18.49
127+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
127+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47

ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
127+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
127+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
128+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
128+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
128+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
128+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

ROADCALC PAVEMENT VOLUMES

	END AREA	VOLUME	PAY UNITS	COST

STATION	MATERIAL	(FT^2)	(yd^3)		(dollars)
129+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
129+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
129+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
129+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
130+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
130+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
130+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

130+51.26	acp	7.29	0.34	0.34	0.34
	cstc	11.66	0.54	0.54	0.54
	curb	2.06	0.10	0.10	0.10
	sidewalk	2.66	0.12	0.12	0.12
	maintenance	0.67	0.03	0.03	0.03
	Total	24.34	1.13	1.13	1.13
130+75.00	acp	7.29	6.41	6.41	6.41
	cstc	11.66	10.25	10.25	10.25
	curb	2.06	1.81	1.81	1.81
	sidewalk	2.66	2.34	2.34	2.34
	maintenance	0.67	0.59	0.59	0.59
	Total	24.34	21.41	21.41	21.41
131+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
131+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
131+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
131+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

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STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
132+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

132+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
132+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
132+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
133+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
133+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
133+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79

ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
133+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
134+00.00	acp	7.29	6.75	6.75	6.75

	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
134+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
134+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
134+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
135+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62

ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	Total	24.34	22.54	22.54	22.54
135+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
135+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
135+51.47	acp	7.29	0.40	0.40	0.40
	cstc	11.66	0.63	0.63	0.63

	curb	2.06	0.11	0.11	0.11
	sidewalk	2.66	0.14	0.14	0.14
	maintenance	0.67	0.04	0.04	0.04
	Total	24.34	1.32	1.32	1.32
135+75.00	acp	7.29	6.35	6.35	6.35
	cstc	11.66	10.16	10.16	10.16
	curb	2.06	1.80	1.80	1.80
	sidewalk	2.66	2.32	2.32	2.32
	maintenance	0.67	0.58	0.58	0.58
	Total	24.34	21.21	21.21	21.21
136+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
136+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
136+50.00	acp	7.29	6.75	6.75	6.75

ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
136+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
137+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
137+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91

	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
137+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
137+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
138+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47

ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
138+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
138+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
138+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
139+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47

	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
139+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
139+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

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STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
139+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
140+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
140+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
140+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
140+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62

	Total	24.34	22.54	22.54	22.54
141+00.00	acp	7.29	6.75	6.75	6.75
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	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
141+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91

ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
141+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
141+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
142+00.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
142+25.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54
142+50.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

142+75.00	acp	7.29	6.75	6.75	6.75
	cstc	11.66	10.79	10.79	10.79
	curb	2.06	1.91	1.91	1.91
	sidewalk	2.66	2.47	2.47	2.47
	maintenance	0.67	0.62	0.62	0.62
	Total	24.34	22.54	22.54	22.54

User Name: rgraffe
Project: Frontage design
Subproject: design, 001

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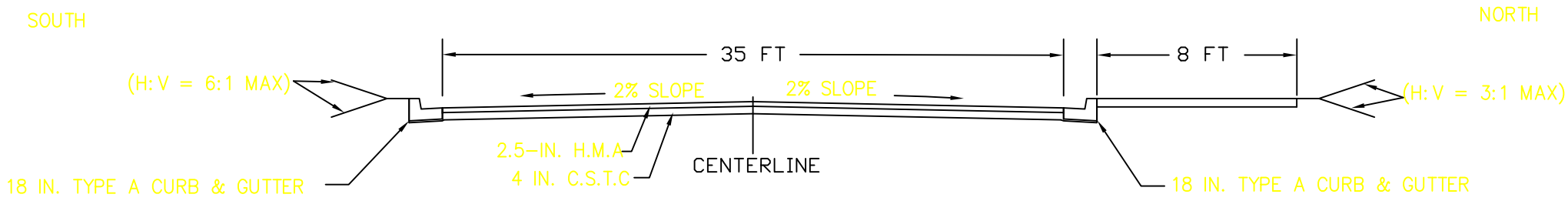
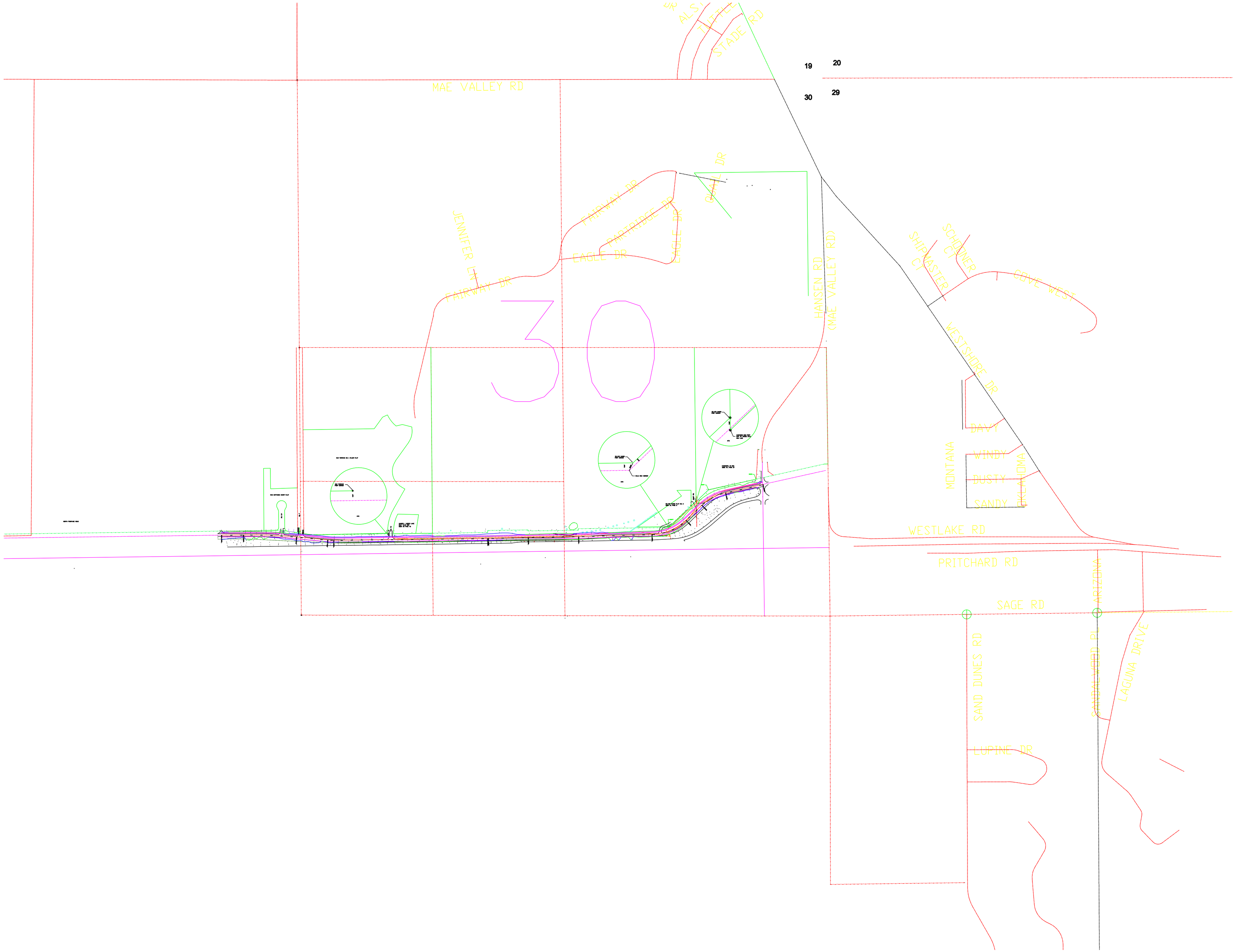
ROADCALC PAVEMENT VOLUMES

STATION	MATERIAL	END AREA (FT^2)	VOLUME (yd^3)	PAY UNITS	COST (dollars)
Total	acp	1078.99	950.73	950.73	950.73
	cstc	1725.29	1520.19	1520.19	1520.19
	curb	305.20	268.92	268.92	268.92
	sidewalk	394.37	347.23	347.23	347.23
	maintenance	98.65	86.86	86.86	86.86
	Total	3602.51	3173.93	3173.93	3173.93



FRONTAGE ROAD TYPICAL STREET CROSS SECTION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ALSTADE RD
JENNIFER LN
FAIRWAY DR
FAIRWAY DR
PARTRIDGE DR
EAGLE DR
EAGLE DR
GAIL DR
HANSEN RD
(MAE VALLEY RD)
SHIPMASTER CT
SCHOONER CT
COVE WEST
WESTSHORE DR
DAVY
WINDY
DUSTY
SANDY
MONTANA
OKLAHOMA
WESTLAKE RD
PRITCHARD RD
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ARIZONA
SAND DUNES RD
SANDRAL WOOD PL
LAGUNA DRIVE
LUPINE DR
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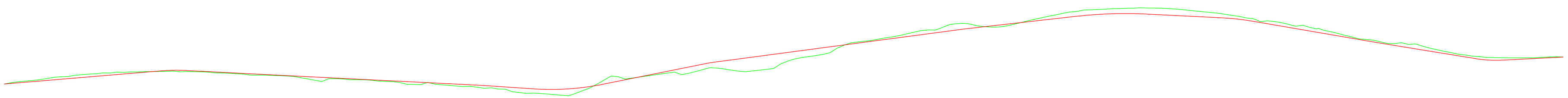

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