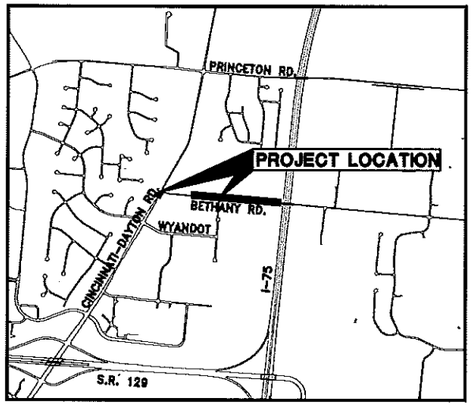
BETHANY ROAD
ROADWAY IMPROVEMENTS
AT LAKOTA FRESHMAN SCHOOLS

LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
SECTION 15, TOWNSHIP 3, RANGE 3



VICINITY MAP
NOT TO SCALE

LEGEND

- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- ELECTRIC MANHOLE
- TRAFFIC SIGNAL BOX
- TRAFFIC SIGNAL POLE
- PULL BOX
- STRAIN POLE
- MAILBOX
- GUARD POST
- GAS VALVE
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- WATER MANHOLE
- TELEPHONE BOX
- SIGN (1 POST)
- SIGN (2 POST)
- TREE
- TREE TO BE REMOVED
- BUSH
- PROJECT BENCHMARK
- -X—X- FENCE LINE
- -W—W- WATERLINE
- -G—G- UNDERGROUND GASLINE
- -UT—UT- UNDERGROUND TELEPHONE
- -UE—UE- UNDERGROUND ELECTRIC
- —E— OVERHEAD ELECTRIC
- SAWCUT
- DITCH
- CONSTRUCTION LIMITS
- EX. DITCH

INDEX OF SHEETS

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NOTE:
UNDERGROUND UTILITIES ARE PLOTTED FROM A COMPILATION OF RECORD INFORMATION AND SURFACE INDICATIONS OF UNDERGROUND STRUCTURES. ALL UTILITIES MAY NOT BE SHOWN. EXACT LOCATIONS CANNOT BE VERIFIED. PLEASE NOTIFY THE OHIO UTILITY PROTECTION SERVICE AT 1–800–362–2764 BEFORE ANY PERIOD OF EXCAVATION OR CONSTRUCTION ACTIVITY.

STANDARD CONSTRUCTION DRAWINGS
FOR A LIST OF ODOT STANDARD CONSTRUCTION DRAWINGS REFERENCED FOR THIS PROJECT, SEE SHEET 6.

PROJECT DESCRIPTION

THIS PROJECT INCLUDES IMPROVEMENTS ALONG BETHANY ROAD EAST OF CINCINNATI ROAD AND WEST OF INTERSTATE 75. THE DESIGN INCLUDES APPROXIMATELY 1,800 LINEAL FEET OF WIDENING BETHANY ROAD TO ADD LEFT TURN LANES INTO LAKOTA SCHOOL DRIVE AND LIBERTY COURT. OTHER IMPROVEMENTS INCLUDE WIDENING AND REDESIGN OF APPROXIMATELY 500 LINEAR FEET OF LIBERTY COURT AND ADDITION OF A 285' RIGHT TURN LANE ON CINCINNATI–DAYTON ROAD. ASSOCIATED IMPROVEMENTS INCLUDE THE ADDITION AND/OR MODIFICATION OF PAVEMENT MARKINGS, SIGNAGE, AND STORM CULVERTS.

2005 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS PROJECT.

THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF BETHANY ROAD, AND THAT PROVISIONS FOR THE MAINTENANCE OF TRAFFIC WILL BE AS SET FORTH ON SHEET 7.

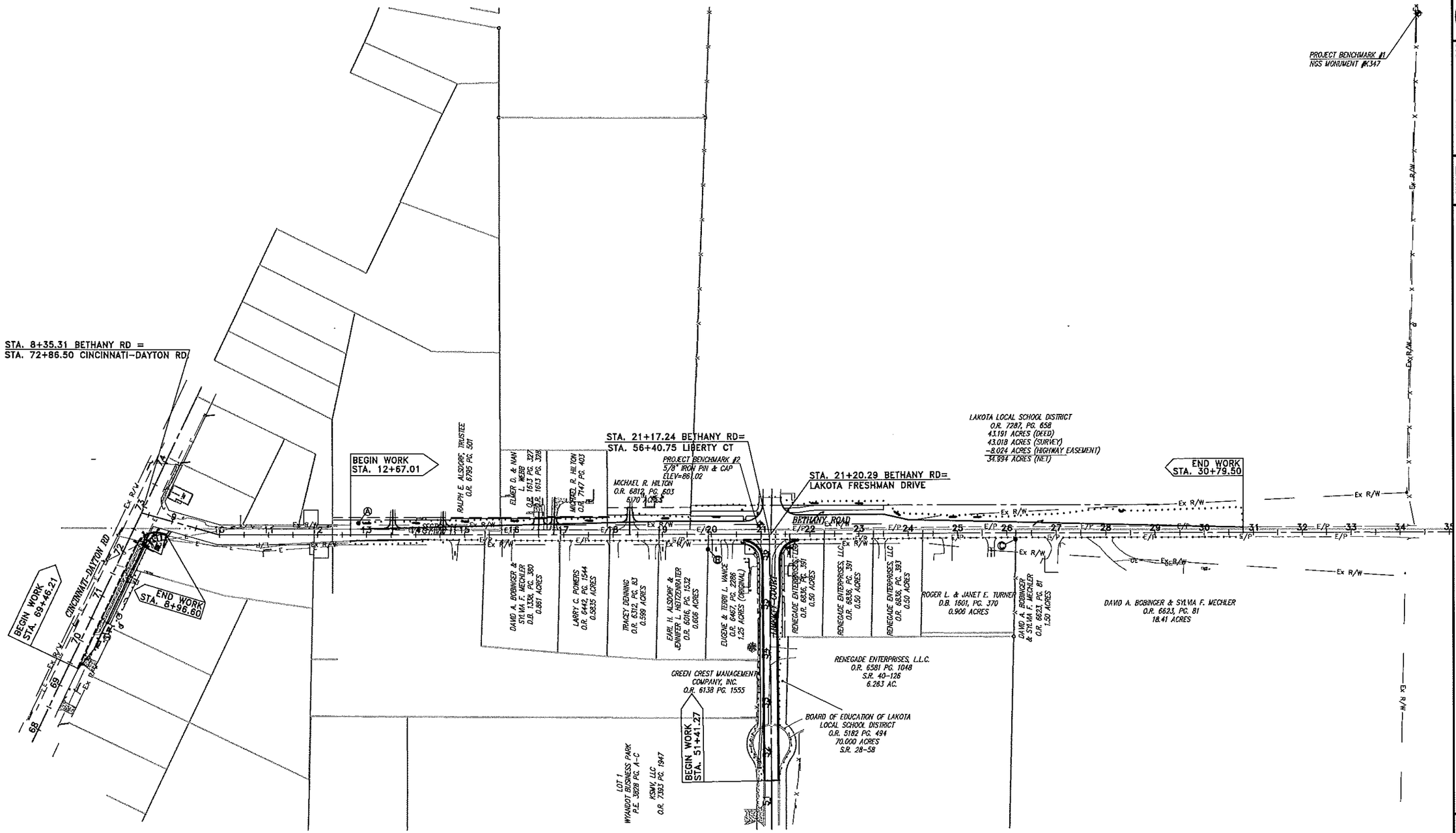
APPROVED
DBQ 3/19/08

SIGNED _____
TIM S. CASTO, E–71423 DATE

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800–362–2764
OHIO UTILITIES PROTECTION SERVICE

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
6305 Centre Park Drive, West Chester, OH 45069
(513) 779–7851 Fax: (513) 779–7852

BETHANY ROAD ROADWAY IMPROVEMENTS



PROJECT BENCHMARK #1
NGS MONUMENT #K347
ELEV=864.42
N: 10468.99
E: 1578.30

PROJECT BENCHMARK #2
5/8" IRON PIN & CAP
ELEV=861.02
N: 9553.73
E: 158.24

CENTERLINE LAYOUT:

DESCRIPTION	STATION	NORTHING	EASTING
BEGIN WORK BETHANY	12+89.05	9601.14	-650.50
INTERSECTION LIBERTY COURT	21+17.24	9532.76	174.86
INTERSECTION SCHOOL DRIVE	21+20.29	9532.51	177.85
PI	24+61.85	9504.30	518.29
END WORK BETHANY	30+79.50	9452.17	1133.74
BEGIN WORK LIBERTY	51+41.27	9034.24	138.80
INTERSECTION BETHANY	56+40.75	9532.76	174.86
BEGIN WORK CINCINNATI-DAYTON	69+46.21	9387.43	-1263.15
INTERSECTION BETHANY	72+86.50	9682.12	-1092.99

LAYOUT CONTROL:

DESCRIPTION	STATION	OFFSET	NORTHING	EASTING	ELEV.
A. TRAVERSE	12+83.43	23.66 LT	9625.19	-654.15	836.98
B. IP	19+92.73	30.14 RT	9513.00	48.28	
C. TRAVERSE	26+17.13	13.02 RT	9478.23	671.92	865.50

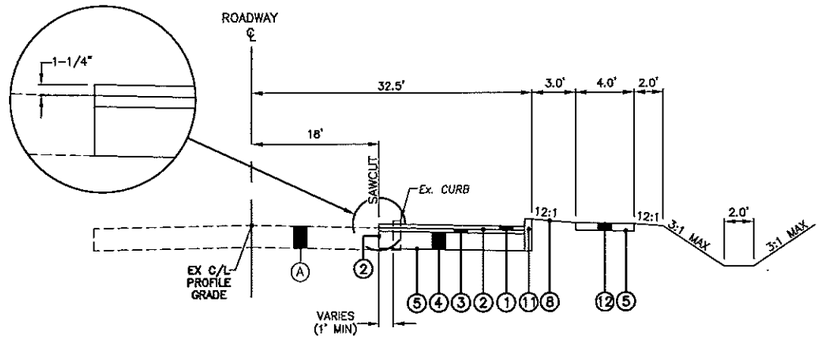
HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED GAU
CHECKED NMM

BETHANY ROAD ROADWAY IMPROVEMENTS
SCHEMATIC LAYOUT

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
8300 Dearie Park Drive
Kings Mills, Ohio 45034
513-779-7851 Fax: 513-779-7852

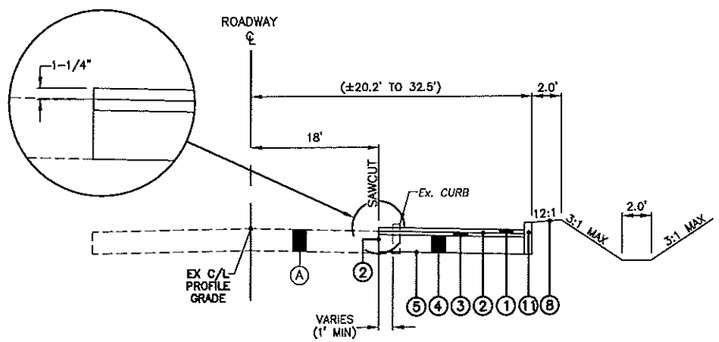
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CINCINNATI-DAYTON ROAD

WIDENING & WALK SECTION

STA. 69+95.93 – STA. 72+27.31 --> 231.38 L.F.
STA. 72+27.31 – STA. 72+70.00 --> SEE INTERSECTION DETAIL



CINCINNATI-DAYTON ROAD

WIDENING SECTION

STA. 69+46.21 – STA. 69+95.93 --> 49.72 L.F.

NOTE: SEE CROSS SECTIONS FOR EXACT TIE-IN SLOPES

LEGEND

(1)	ITEM 448	1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1
(2)	ITEM 408	TACK COAT (0.1 GAL/S.Y.)
(3)	ITEM 448	1-1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, PG64-28, TYPE 2
(4)	ITEM 301	9" BITUMINOUS AGGREGATE BASE
(5)	ITEM 204	SUBGRADE COMPACTION
(6)	ITEM 608	6" CONCRETE BIKE PATH
(7)	ITEM 609	CONCRETE CURB AND GUTTER, TYPE 2
(8)	ITEM 659	SEEDING AND MULCHING
(9)	ITEM 448	VARIABLE DEPTH (0" TO 3/4") ASPHALT CONCRETE INTERMEDIATE COURSE, PG64-28, TYPE 2
(10)	ITEM 254	PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH
(11)	ITEM 609	CONCRETE CURB, TYPE 6
(12)	ITEM 608	4" CONCRETE WALK

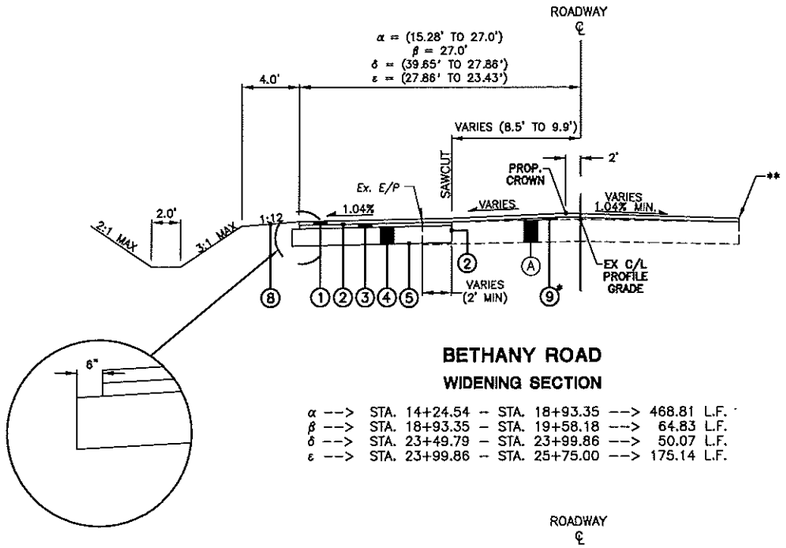
(A) EXISTING PAVEMENT

CALCULATED GAU
CHECKED NMM

CINCINNATI-DAYTON ROAD ROADWAY IMPROVEMENTS
TYPICAL SECTIONS

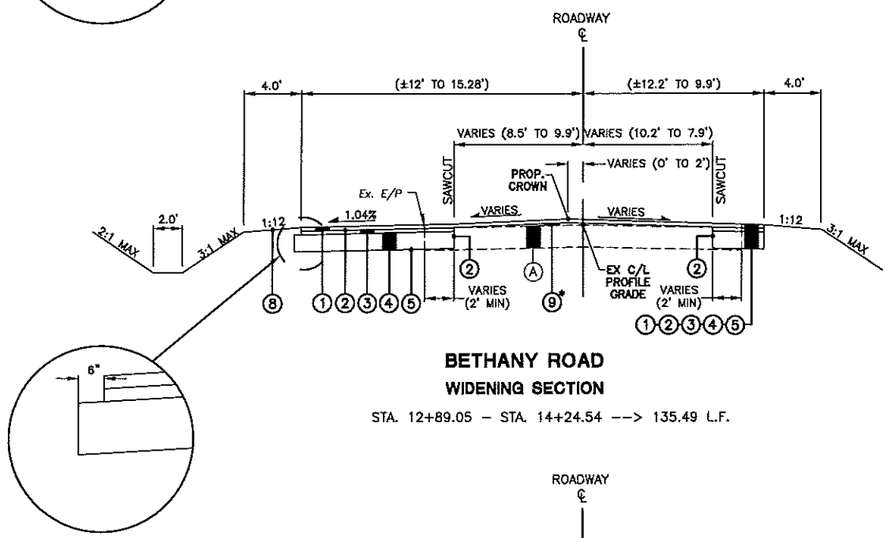
KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
8000 Centre Park Drive
West Chester, OH 45069
513-779-7851 / Fax: 513-779-7852

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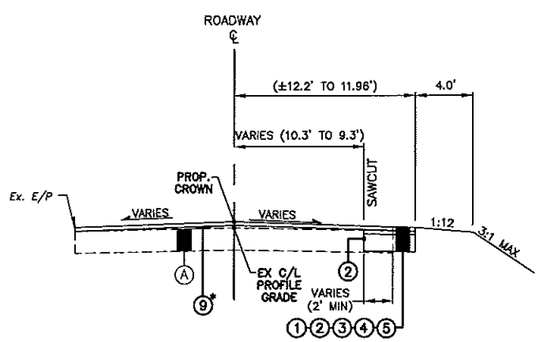
BETHANY ROAD
WIDENING SECTION

α ---> STA. 14+24.54 – STA. 18+93.35 ---> 468.81 L.F.
β ---> STA. 18+93.35 – STA. 19+58.18 ---> 64.83 L.F.
δ ---> STA. 23+49.79 – STA. 23+99.86 ---> 50.07 L.F.
ε ---> STA. 23+99.86 – STA. 25+75.00 ---> 175.14 L.F.



BETHANY ROAD
WIDENING SECTION

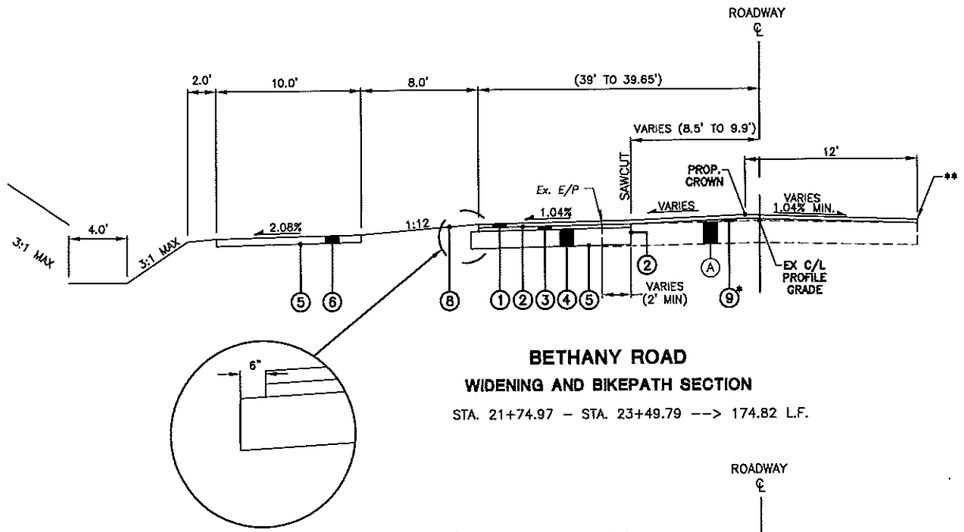
STA. 12+89.05 – STA. 14+24.54 ---> 135.49 L.F.



BETHANY ROAD
WIDENING SECTION

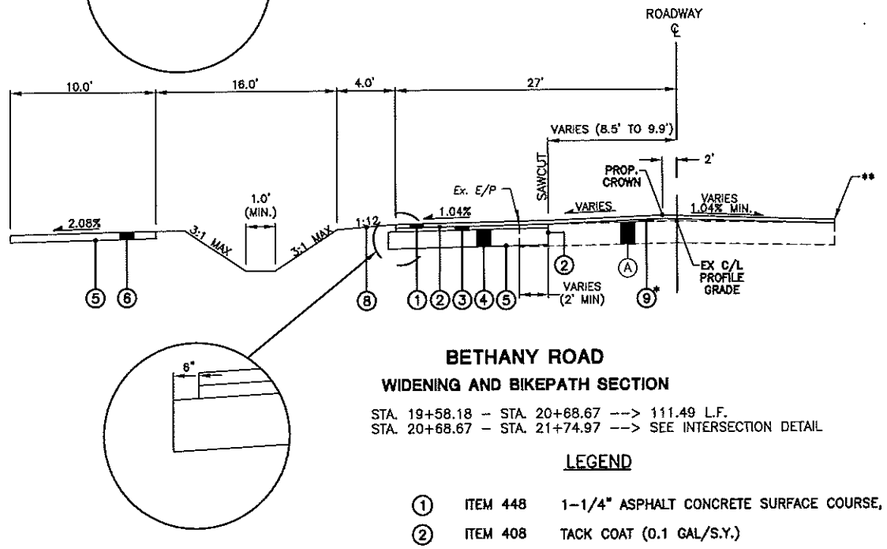
STA. 12+67.01 – STA. 12+89.05 ---> 22.04 L.F.

NOTE: SEE CROSS SECTIONS FOR EXACT TIE–IN SLOPES



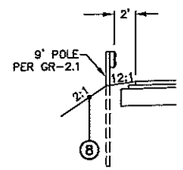
BETHANY ROAD
WIDENING AND BIKEPATH SECTION

STA. 21+74.97 – STA. 23+49.79 ---> 174.82 L.F.



BETHANY ROAD
WIDENING AND BIKEPATH SECTION

STA. 19+58.18 – STA. 20+68.67 ---> 111.49 L.F.
STA. 20+68.67 – STA. 21+74.97 ---> SEE INTERSECTION DETAIL



GUARDRAIL DETAIL
STA. 28+18 TO STA. 30+79.5

LEGEND

①	ITEM 448	1–1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1
②	ITEM 408	TACK COAT (0.1 GAL/S.Y.)
③	ITEM 448	1–1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, PG64–28, TYPE 2
④	ITEM 301	9" BITUMINOUS AGGREGATE BASE
⑤	ITEM 204	SUBGRADE COMPACTION
⑥	ITEM 608	6" CONCRETE BIKE PATH
⑦	ITEM 609	CONCRETE CURB AND GUTTER, TYPE 2
⑧	ITEM 659	SEEDING AND MULCHING
⑨	ITEM 448	VARIABLE DEPTH (0" TO 1–1/2") ASPHALT CONCRETE INTERMEDIATE COURSE, PG64–28, TYPE 2
⑩	ITEM 254	PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH
⑪	ITEM 609	CONCRETE CURB, TYPE 6
⑫	ITEM 608	4" CONCRETE WALK

Ⓐ EXISTING PAVEMENT

*CONTRACTOR SHALL BE ADVISED THAT THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER'S OFFICE. THE INTENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE IS TO REESTABLISH A ROADWAY CROWN AND CROSS SLOPE. PROPOSED CROSS SLOPE SHALL BE A MINIMUM 1/8" PER FOOT. THIS WORK SHALL BE PERFORMED AT THE DIRECTION OF THE BUTLER COUNTY ENGINEER'S OFFICE.

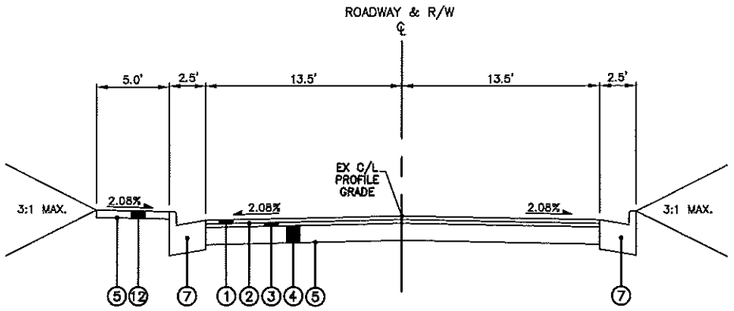
**PROPOSED PAVEMENT ELEVATIONS ALONG THE SOUTH EDGE OF PAVEMENT SHOULD BE 1.25" ABOVE EXISTING GRADES.

CALCULATED GAU
CHECKED NMM

BETHANY ROAD ROADWAY IMPROVEMENTS
TYPICAL SECTIONS

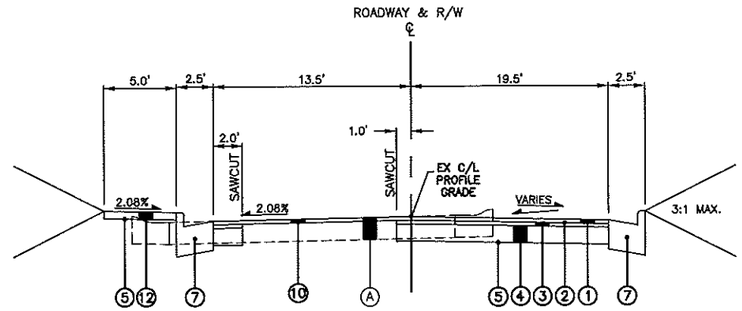
KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
West Chester, OH 45069
513-755-1500 Fax: 513-755-1501

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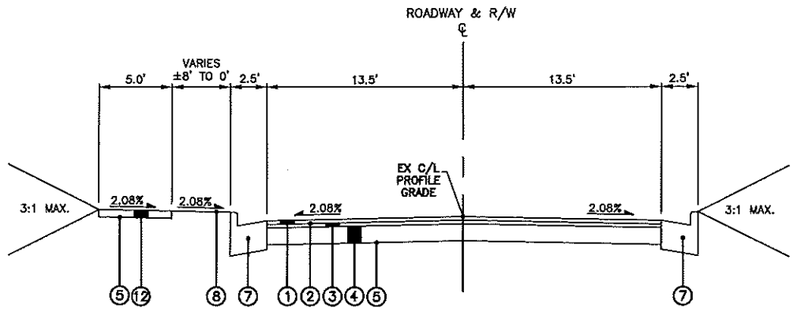
LIBERTY COURT
FULL DEPTH SECTION

STA. 52+75.00 – STA. 54+25.00 --> 150.00 L.F.



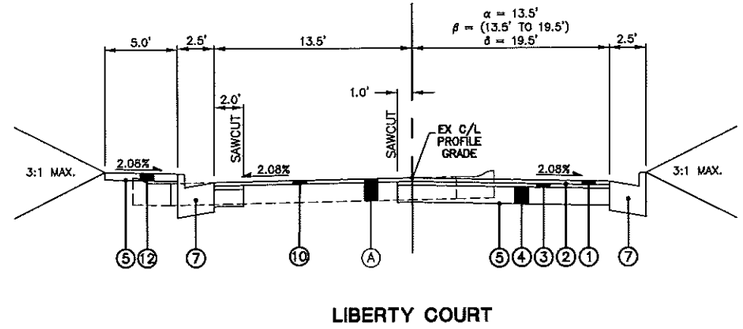
LIBERTY COURT
SALVAGE SECTION

STA. 55+50.00 – STA. 55+88.77 --> 38.77 L.F..
STA. 55+88.77 – STA. 56+29.14 --> SEE INTERSECTION DETAIL



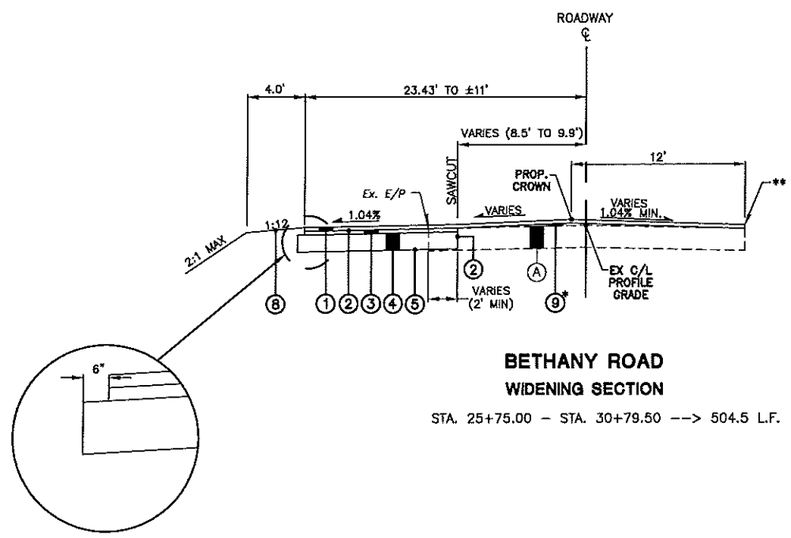
LIBERTY COURT
FULL DEPTH SECTION

STA. 51+41.27 – STA. 52+75.00 --> 133.73 L.F.



LIBERTY COURT
SALVAGE SECTION

α --> STA. 54+25.00 – STA. 54+68.34 --> 43.34 L.F.
β --> STA. 54+68.34 – STA. 55+18.34 --> 50.00 L.F.
δ --> STA. 55+18.34 – STA. 55+50.00 --> 31.66 L.F.



BETHANY ROAD
WIDENING SECTION

STA. 25+75.00 – STA. 30+79.50 --> 504.5 L.F.

NOTE: SEE CROSS SECTIONS FOR EXACT TIE-IN SLOPES

LEGEND

(1)	ITEM 448	1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1
(2)	ITEM 408	TACK COAT (0.1 GAL/S.Y.)
(3)	ITEM 448	1-1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, PG64-28, TYPE 2
(4)	ITEM 301	9" BITUMINOUS AGGREGATE BASE
(5)	ITEM 204	SUBGRADE COMPACTION
(6)	ITEM 608	6" CONCRETE BIKE PATH
(7)	ITEM 609	CONCRETE CURB AND GUTTER, TYPE 2
(8)	ITEM 659	SEEDING AND MULCHING
(9)	ITEM 448	VARIABLE DEPTH (0" TO 3/4") ASPHALT CONCRETE INTERMEDIATE COURSE, PG64-28, TYPE 2
(10)	ITEM 254	PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH
(11)	ITEM 609	CONCRETE CURB, TYPE 6
(12)	ITEM 608	4" CONCRETE WALK
(A)	EXISTING PAVEMENT	

CALCULATED GAU
CHECKED NMM

LIBERTY COURT ROADWAY IMPROVEMENTS
TYPICAL SECTIONS

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
3000 Corporate Exchange Drive, Suite 300
Maumee, Ohio 43537
419-887-3600 Fax: 419-887-3622

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SPECIFICATIONS AND STANDARD CONSTRUCTION DRAWINGS
THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, 2005 CONSTRUCTION AND MATERIALS SPECIFICATIONS, AND THE NOTED STANDARD CONSTRUCTION DRAWINGS SHALL GOVERN THIS IMPROVEMENT.

WHEREVER THE WORD "STATE" OCCURS, IT IS TO MEAN THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT). WHENEVER THE WORD "ENGINEER" IS USED HEREIN, IT SHALL BE HELD TO MEAN THE BUTLER COUNTY ENGINEER, OR DULY AUTHORIZED REPRESENTATIVE.

PRE-CONSTRUCTION MEETING
FOLLOWING THE AWARD OF THE CONTRACT AND BEFORE STARTING ANY WORK, THE CONTRACTOR AND HIS SUPERINTENDENT, SHALL MEET WITH THE ENGINEER FOR A PRE-CONSTRUCTION MEETING. THE PURPOSE OF SUCH IS FOR REVIEWING THE SITE, AND ANY RESTRICTIONS AND REGULATIONS GOVERNING THE WORK.

ANY SCHEDULES, REQUESTS, PAPERS, APPROVALS, SUBMITTALS, SHOP DRAWINGS, CHANGES, ETC. AS CALLED FOR IN THE CONTRACT DOCUMENTS SHALL BE DONE AT THIS TIME UNLESS OTHERWISE DIRECTED.

PERMITS, FEES AND NOTICES
THE CONTRACTOR SHALL OBTAIN, AT HIS EXPENSE, ANY AND ALL PERMITS AND INSPECTIONS REQUIRED FOR THE PROSECUTION OF THE WORK BY LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS.

MATERIALS AND WORKMANSHIP
UNLESS OTHERWISE SPECIFIED, ALL MATERIALS SHALL BE NEW AND BOTH WORKMANSHIP AND MATERIALS SHALL BE OF THE FIRST QUALITY, PROPER AND SUFFICIENT FOR THE PURPOSE CONTEMPLATED. THE CONTRACTOR SHALL FURNISH, IF SO REQUIRED, SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND WORKMANSHIP. ALL ITEMS OF EQUIPMENT AND/OR MATERIALS PROPOSED FOR SUBSTITUTION MUST BE APPROVED BY THE ENGINEER IN WRITING AND SHALL BE EQUAL OR BE SUPERIOR TO THE ITEMS SPECIFIED IN THE CONTRACT DOCUMENTS. IF SAID SUBSTITUTION PROPOSED BY THE CONTRACTOR FOR A SPECIFIED ITEM REQUIRED ENGINEERING REVISIONS, THE EXPENSE OF SUCH REVISIONS SHALL BE PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

EXISTING FACILITIES
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM HIS WORK IN SUCH A MANNER AS NOT TO DAMAGE OR DESTROY ANY EXISTING FACILITY. IF ANY SUCH DAMAGE DOES OCCUR DUE TO THE CONTRACTOR'S OPERATIONS, HE SHALL REPLACE THE DAMAGED PORTION AT HIS EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.

EXAMINATION OF THE SITE
THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE OF THE PROPOSED WORK, THE PLANS AND SPECIFICATIONS. THE SUBMISSION OF A BID SHALL BE CONSIDERED EVIDENCE THAT THE CONTRACTOR HAS MADE SUCH EXAMINATION AND IS SATISFIED AS TO THE CONDITIONS TO BE ENCOUNTERED IN PERFORMING THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

SECURITY AND PROTECTION PROVISIONS
THE TYPES OF TEMPORARY SECURITY AND PROTECTION PROVISIONS REQUIRED INCLUDE, BUT NOT BY WAY OF LIMITATION, BARRICADES, WARNING SIGNS/LIGHTS, SITE ENCLOSURE FENCE, ETC. AND SIMILAR PROVISIONS INTENDED TO MINIMIZE PROPERTY LOSSES, PERSONAL INJURIES AND CLAIMS FOR DAMAGE TO THE PROJECT SITE. THE CONTRACTOR SHALL PROVIDE ANY PROTECTION SERVICES AND SYSTEMS IN COORDINATION WITH ACTIVITIES AND IN A MANNER TO ACHIEVE 24-HOUR, 7-DAY PER-WEEK EFFECTIVENESS.

TRENCHES THAT ARE OPEN SHALL NOT REMAIN UNPROTECTED AT ANY TIME. DURING NON-WORKING HOURS, TRENCHES SHALL BE CLOSED AND ANY EQUIPMENT ON THE SITE SHALL BE ADEQUATELY FENCED.

CONSTRUCTION LIMITS
THE CONTRACTOR SHALL RESTRICT ALL OF HIS ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE ACTUAL CONSTRUCTION LIMITS ARE SHOWN ON THE PLANS OR THE EXISTING OR PROPOSED R/W, WHICHEVER IS NEAREST. SHOULD THE CONTRACTOR WISH TO USE ANY AREA OUTSIDE THESE LIMITS, HE MUST SUBMIT HIS REQUEST IN WRITING TO THE ENGINEER. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA THAT THE CONTRACTOR PLANS TO USE AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. THE ENGINEER SHALL APPROVE THE REQUEST IN WRITING BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA. PRIOR TO THE BEGINNING OF WORK, THE CONTRACTOR, SUPERINTENDENT OR HIS REPRESENTATIVE, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY SHALL REVIEW AND RECORD ALL ADJACENT SITES WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF THE ADJACENT SITES WILL BE MADE. ANY AREAS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPAIRED OR REPLACED, AT THE CONTRACTOR'S EXPENSE, IN KIND OR AS DIRECTED BY THE ENGINEER.

STANDARD CONSTRUCTION DRAWINGS
REFERENCE SHALL BE MADE TO THE MOST CURRENT VERSION OF THE FOLLOWING STANDARD CONSTRUCTION DRAWINGS.

BP-2.1	HW-2.2	GR-1.1	TC-41.20	MT-95.50
BP-2.2		GR-2.1	TC-42.10	MT-105.10
BP-3.1	DM-1.1		TC-42.20	MT-105.11
BP-4.1	DM-1.4	TC-21.10	TC-65.10	
	DM-4.3	TC-21.20	TC-65.11	
CB-1.1	DM-4.4	TC-22.20	TC-71.10	

SUPPLEMENTAL SPECIFICATIONS
REFERENCE SHALL BE MADE TO THE MOST CURRENT VERSION OF THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS.

832

PROTECTING EXISTING UNDERGROUND UTILITIES
THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING, MARKING, OR OTHERWISE DESIGNATING THE LOCATIONS OF THE UNDERGROUND UTILITIES IN THE CONSTRUCTION AREAS IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH OF WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF PLANNED CONSTRUCTION. EXTREME CARE SHALL BE TAKEN IN THE VICINITY OF THE EXISTING UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ISOLATE, BRACE, SUPPORT, SHEET, ETC. AND PROTECT THE EXISTING UTILITY FROM MOVING EITHER HORIZONTALLY OR VERTICALLY. IF SUCH MOVEMENT DOES OCCUR DUE TO THE CONTRACTOR'S OPERATIONS, HE SHALL REPAIR THE UTILITY AT HIS EXPENSE. THE CONTRACTOR MAY ELECT TO REMOVE AND RECONSTRUCT PORTIONS OF THE EXISTING UTILITY AT HIS OWN EXPENSE IF HE SO DESIRES.

SHOULD AN UNLOCATED OR AN EXTREME VARIANCE IN LOCATION OF A UTILITY BE ENCOUNTERED DURING EXCAVATION, CONSULT THE ENGINEER IMMEDIATELY FOR DIRECTIONS.

DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED AND USED BY THE ENGINEER OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE ENGINEER AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICING HAS BEEN PROVIDED. COOPERATION WITH THE ENGINEER IN KEEPING RESPECTIVE SERVICES AND FACILITIES IN OPERATION IS ESSENTIAL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM HIS WORK IN SUCH A MANNER AS NOT TO DAMAGE OR DESTROY ANY EXISTING UTILITY. IF ANY SUCH DAMAGE DOES OCCUR DUE TO THE CONTRACTOR'S OPERATIONS, HE SHALL NOTIFY THE ENGINEER IMMEDIATELY AND REPLACE THE DAMAGED PORTION IMMEDIATELY, AND AT HIS EXPENSE.

PROTECTION OF EXISTING TREES AND VEGETATION
THE CONTRACTOR SHALL PROTECT EXISTING TREES AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING AND BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS, OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY FENCES, BARRICADES OR GUARDS AS REQUIRED TO PROTECT TREES AND VEGETATION. THE CONTRACTOR SHALL WATER TREES AND OTHER VEGETATION WITHIN THE CONSTRUCTION AREA TO MAINTAIN THEIR HEALTH DURING THE COURSE OF CONSTRUCTION OPERATIONS. NO TREES SHALL BE REMOVED UNLESS APPROVED BY THE ENGINEER. PROVIDE PROTECTION FOR ROOTS OVER 1 1/2" DIAMETER THAT ARE CUT DURING CONSTRUCTION OPERATIONS. COAT AND CUT FACES WITH AN EMULSIFIED ASPHALT OR OTHER ACCEPTABLE COATING, ESPECIALLY FOR MUTILATED OR HORTICULTURE USE ON CUT OR DAMAGED PLANT TISSUES. TEMPORARILY COVER ALL EXPOSED ROOTS WITH WET BURLAP TO PREVENT ROOTS FROM DRYING OUT. PROVIDE EARTH COVER AS SOON AS POSSIBLE.

THE CONTRACTOR SHALL REPAIR OR REPLACE TREES AND VEGETATION WHICH ARE DAMAGED BY CONSTRUCTION OPERATIONS, IN A MANNER ACCEPTABLE TO THE ENGINEER AT THE CONTRACTOR'S EXPENSE. ALL TREES WHICH CANNOT BE REPAIRED AND RESTORED TO FULL-GROWTH STATUS, AS DETERMINED BY A TREE SURGEON, SHALL BE REPLACED.

WORK LIMITS
THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

COOPERATION WITH UTILITY COMPANIES
WHILE THE WORK OF THIS CONTRACT IS BEING PERFORMED, THE UTILITY COMPANIES MAY BE WORKING IN THE AREA ADJUSTING AND RESETTING EXISTING FACILITIES. THE CONTRACTOR SHALL FULLY COOPERATE WITH UTILITY COMPANIES SO THAT THE ENTIRE WORK IS COMPLETED IN A MANNER CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. THE CONTRACTOR, UTILITIES, AND ENGINEER SHALL DISCUSS THE NECESSARY CONSTRUCTION SCHEDULES TO COMPLETE THE PROJECT AT THE PRE-CONSTRUCTION MEETING.

ALL UTILITIES WHICH ARE SHOWN OR LOCATED DURING THE COURSE OF CONSTRUCTION THAT ARE FOUND TO BE IN CONFLICT WITH THESE PLANS ARE TO BE RELOCATED OR ADJUSTED BY THE OWNER OF THE UTILITY.

UTILITY COORDINATION:
THE FOLLOWING IS A LIST OF THE KNOWN EXISTING UTILITIES IN THE PROJECT AREA ALONG WITH THE RESPECTIVE OWNERS. THE LIST IS INCLUDED FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITY OWNERS IN THE PROJECT AREA PRIOR TO START OF CONSTRUCTION WHETHER LISTED ON THIS PAGE OR NOT.

ELECTRIC
CINERGY
139 EAST FOURTH STREET
ROOM 467A
CINCINNATI, OH 45202
(513) 287-1288

SEWER
BUTLER COUNTY DEPARTMENT
OF ENVIRONMENTAL SERVICES
130 HIGH STREET
HAMILTON, OH 45011
(513) 887-3071

WATER
BUTLER COUNTY DEPARTMENT
OF ENVIRONMENTAL SERVICES
130 HIGH STREET
HAMILTON, OH 45011
(513) 887-3061

GAS
CINERGY
139 EAST FOURTH STREET
ROOM 460A
CINCINNATI, OH 45202
(513) 287-1928

CABLE
TIME WARNER
11252 CORNELL PARK DRIVE
CINCINNATI, OH 45242
(513) 489-5000

TELEPHONE
CINCINNATI BELL
201 E. 4TH STREET
ROOM 103
CINCINNATI, OH 45202
(513) 566-7043

UNDERGROUND UTILITIES
THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE AS OBTAINED FROM THE OWNERS OF THE UTILITIES AS REQUIRED BY SECTION 153.64 OF THE OHIO REVISED CODE.

THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN LOCATED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT; BUT THEIR ACCURACY OR COMPLETENESS IS NOT GUARANTEED.

UTILITIES NOTIFICATION
AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN ON THE PLAN.

THE OWNER OF THE UNDERGROUND FACILITY SHALL, WITHIN 48 HOURS (EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS), MARK THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE AND THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

CONSTRUCTION NOISE
ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 9:00 PM AND 7:00 AM. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

WEATHER CONDITIONS
NO CONSTRUCTION SHALL BE DONE DURING STORMY, FREEZING, OR INCLEMENT WEATHER UNLESS PERMISSION IS GIVEN BY THE ENGINEER. WHENEVER WORK PROCEEDS DURING SUCH WEATHER, THE CONTRACTOR SHALL PROVIDE APPROVED FACILITIES, INCLUDING HEAT (IF REQUIRED), FOR THE PROTECTION OF ALL MATERIALS AND FINISHED WORK.

RESTORATION
THE CONTRACTOR SHALL PROVIDE FOR PROTECTION OF THE FOLLOWING: EXISTING STREETS, DRIVEWAYS, SIDEWALKS, CURBS, GUTTERS, RE-SEEDING/RE-SODDING, REMOVAL OF TREES, RESTORATION OF AGRICULTURAL LAND, THE MAINTENANCE OF THE CONSTRUCTION AREA DURING PROGRESS OF THE WORK AND THE COMPLETE RESTORATION OF THE CONSTRUCTION AREA TO ITS ORIGINAL CONDITION AT THE COMPLETION OF THE WORK. THE CONTRACTOR SHALL CONTINUOUSLY CARRY ON WITH THE FINAL RESTORATION OF THE CONSTRUCTION AREA AFTER THE BACKFILLING IS COMPLETED, AND HE SHALL PROCEED TO RESTORE TO ITS ORIGINAL CONDITION ALL STREETS, DRIVEWAYS, SIDEWALKS, CURBS, GUTTERS, STRUCTURES, AND ALL AREAS THAT WERE DAMAGED, DISTURBED, OR OCCUPIED BY THE CONTRACTOR IN CONNECTION WITH ANY PHASE OF THE WORK.

PAVEMENTS, TREES, SHRUBS, FENCES, POLES, OR OTHER PROPERTY AND SURFACE STRUCTURES WHICH HAVE BEEN DAMAGED, REMOVED, OR DISTURBED BY THE CONTRACTOR, WHETHER DELIBERATELY OR THROUGH FAILURE TO CARRY OUT THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, STATE LAWS, MUNICIPAL ORDINANCES, THE SPECIFIC DIRECTION OF THE ENGINEER, OR THROUGH FAILURE TO EMPLOY USUAL AND REASONABLE SAFEGUARDS SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

ALL TEMPORARY SIGNS, SPRINKLER SYSTEMS, LANDSCAPING, ORNAMENTAL FENCING, ETC., LOCATED WITHIN THE PROJECT LIMITS MUST BE REPLACED OR RELOCATED UPON COMPLETION OF THE CONSTRUCTION.

COST OF THE ABOVE SHALL BE PAID FOR UNDER ITEM 201 CLEARING AND GRUBBING PER PLAN.

TACK COAT
THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER.

ITEM 201 CLEARING AND GRUBBING, AS PER PLAN
IN ADDITION TO THE APPLICABLE REQUIREMENTS OF ITEM 201 THE FOLLOWING SHALL ALSO APPLY:

A: THE CONTRACTOR SHALL MEET WITH THE ENGINEER TO DETERMINE WHICH TREES AND BUSHES WILL BE REQUIRED FOR REMOVAL.
B: THE CONTRACTOR SHALL PROTECT ANY TREES, BUSHES AND VEGETATION, NOT DESIGNATED FOR REMOVAL, WITHIN THE AREA OF HIS OPERATIONS.

SEEDING AND MULCHING
SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. SEEDING REQUIREMENTS PER ODOT CLASS I, LAWN MIXTURE SEEDING SPECIFICATIONS.

ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION AND ITEM 203 EMBANKMENT
IN ADDITION TO THE APPLICABLE REQUIREMENTS OF ITEM 203 THE FOLLOWING SHALL ALSO APPLY:

A. THE CONTRACTOR SHALL COMPENSATE FOR ANY LOSS OF MATERIAL DUE TO COMPACTION, ETC.

B. THE CONTRACTOR SHALL PROTECT ANY TREES AND VEGETATION, NOT DESIGNATED FOR REMOVAL WITHIN AND ALONG THE LIMITS OF THE EXCAVATION AND EMBANKMENT AREAS.

C. THE CONTRACTOR SHALL SCORE OR OTHERWISE PREPARE THE EXISTING PAVEMENT WHEN NEW PAVEMENT IS TO BE PLACED ON THE EXISTING PAVEMENT.

ITEM 638 FIRE HYDRANT REMOVE AND RESET, AS PER PLAN
IN ADDITION TO THE APPLICABLE REQUIREMENTS OF ITEM 638, THE FOLLOWING SHALL ALSO APPLY. ALL LABOR, EQUIPMENT, MATERIALS INCLUDING ANY JOINTS, FITTINGS, PIPE AND INCIDENTALS REQUIRED TO REMOVE AND RESET THE FIRE HYDRANT AS SHOWN ON THE PLANS SHALL BE INCLUDED AND PAID FOR AS A PART OF ITEM 638 FIRE HYDRANT REMOVE AND RESET, AS PER PLAN

CALCULATED GAU
CHECKED NMM

BETHANY ROAD ROADWAY IMPROVEMENTS
GENERAL NOTES

KLEINGERS & ASSOCIATES
ENGINEERS & SURVEYORS
8300 Dutch Ford Drive
Middletown, Ohio 45044
513-779-7851 Fax: 513-779-7852

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MAINTENANCE OF SEWER FLOWS
THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN SEWER FLOWS AT ALL TIMES THROUGH EXISTING FACILITIES WHICH ARE TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE COMPLETED AND PLACED IN USE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED.

ALL EXISTING SEWERS SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL
THE CONTRACTOR SHALL PERFORM THE NECESSARY PRECAUTIONS TO AVOID EXCESSIVE SOIL EROSION AND THE RUNOFF OF SEDIMENT INSIDE AND DOWNSTREAM OF THE PROJECT TO THE SATISFACTION OF THE ENGINEER. THIS SHALL INCLUDE, BUT IS NOT LIMITED TO, ERECTION OF SILT FENCE (SF) ALONG THE PERIMETER OF THE CONSTRUCTION LIMITS AND PLACEMENT OF STRAW BALE BARRIERS (SBB) AND/OR FILTER BARRIERS (FB) AS DITCH CHECKS. DITCH CHECKS SHALL BE PLACED AT A MAXIMUM SPACING OF 50 FEET ALONG ALL PROPOSED DITCHES.

THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACTS ON RECEIVING WATERS. IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE STABILIZED.

INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE CONCURRENT WITH THE CLEARING AND GRUBBING AND/OR GRADING OPERATIONS. ALL REASONABLE ATTEMPTS SHOULD BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND.

AREAS TO REMAIN DORMANT FOR MORE THAN 45 DAYS SHOULD BE IMMEDIATELY STABILIZED WITH TEMPORARY SEEDING AND MULCHING, EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES.

MAINTENANCE OF TRAFFIC, GENERAL REQUIREMENTS
THE REQUIRED WORK SHALL BE PERFORMED IN A MANNER THAT CAUSES THE LEAST INCONVENIENCE TO AND THE PROVIDES THE MAXIMUM SAFETY FOR THE TRAVELING SAFETY-SERVICE AND THE CONTRACTOR. THE REQUIREMENTS FOR MAINTAINING TRAFFIC AS INDICATED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (REFERRED TO AS THE "OMUTCD"), CURRENT EDITION, PERTINENT ITEMS IN THE ODOT SPECIFICATIONS, AND AS REQUESTED BY THE ENGINEER SHALL APPLY IN ADDITION TO THE FOLLOWING NOTES.

SHOULD ANY PAVED AREAS NOT DESIGNATED FOR MAINTAINING TRAFFIC BECOME DAMAGED OR DESTROYED DURING CONSTRUCTION DUE TO THE CONTRACTOR'S NEGLIGENCE OR FAILURE TO PROVIDE ADEQUATE SIGNS, BARRICADES, DRUMS, FLAGGERS OR OTHER TRAFFIC CONTROL DEVICES, THE RESTORATION OF THE PAVED AREAS SHALL BE AT THE EXPENSE OF THE CONTRACTOR AND TO THE SATISFACTION OF THE ENGINEER.

TEMPORARY PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO A STAGE OF CONSTRUCTION BEING OPENED TO TRAFFIC.

DRUMS SHALL BE REFLECTORIZED, AND USED IN ACCORDANCE WITH ITEM 614.03 AND THE OMUTCD. DRUMS SHALL BE SPACED AT A MAXIMUM INTERVAL OF 25 FEET CENTER TO CENTER UNLESS SHOWN OTHERWISE ON THESE PLANS OR AS DIRECTED BY THE ENGINEER . DRUMS SHALL BE SPACED AT 10 FOOT INTERVALS ALONG ALL CURB RADII. THE CONTRACTOR SHALL ADJUST THE SPACING ON ALL DRUMS AS DIRECTED BY THE ENGINEER TO ALLOW ACCESS AS REQUIRED, WHILE MAINTAINING SAFETY DURING CONSTRUCTION.

THE CONTRACTOR WILL BE REQUIRED TO PROVIDE, ERECT, MAINTAIN (PROPER POSITION, KEPT CLEAN AND LEGIBLE, AND IN GOOD WORKING CONDITION), AND REMOVE LIGHTS, SIGNS, DRUMS, AND ALL OTHER TRAFFIC CONTROL DEVICES NECESSARY FOR THE MAINTENANCE OF TRAFFIC. ALL SIGNS SHALL BE REFLECTORIZED OR ILLUMINATED. PLACEMENT OF ALL TRAFFIC CONTROL DEVICES SHALL START AND PROCEED IN THE DIRECTION OF THE FLOW OF TRAFFIC. REMOVAL OF TRAFFIC CONTROL DEVICES SHALL BEGIN AT THE END OF THE CONSTRUCTION AREA AND PROCEED TOWARD ONCOMING TRAFFIC. THE CONTRACTOR SHALL PROVIDE FOR THE INSTALLATION OF ALL NECESSARY TRAFFIC CONTROL DEVICES BEFORE BEGINNING WORK AND IMMEDIATELY REMOVE THESE DEVICES WHEN WORK IS SUSPENDED OR COMPLETE.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

BEFORE THE WORK BEGINS, THE CONTRACTOR WILL PROVIDE THE ENGINEER WITH THE NAMES AND TELEPHONE NUMBERS OF TWO (2) PERSONS WHO CAN BE CONTACTED 24 HOURS A DAY BY THE ENGINEER, AFFECTED SAFETY-SERVICE AGENCIES, AND ALL INTERESTED POLICE AGENCIES, TO REPAIR AND/OR REPLACE THE TRAFFIC CONTROL DEVICES AS NEEDED TO MAINTAIN THE SAFETY OF THE TRAVELED PAVEMENT.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

ACCESS TO LOCAL DRIVES
CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL RESIDENCES AND BUSINESSES WITHIN THE PROJECT AREA THROUGHOUT THE DURATION OF THE PROJECT. COST OF MAINTAINING ACCESS SHALL BE INCIDENTAL TO ITEM 614, MAINTENANCE OF TRAFFIC, AS PER PLAN.

TRENCH FOR WIDENING
TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING
THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 3 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

EXISTING PAVEMENT MARKINGS
ANY PAVEMENT MARKINGS AFFECTED ON CINCINNATI-DAYTON ROAD NOT NOTED FOR REMOVAL SHOULD BE REPLACED IN KIND.

LOW STRENGTH MORTAR BACKFILL
WHENEVER WATER LINES, STORM LINES, SANITARY LINES, CULVERT PIPES, BOX CULVERTS, ALL UTILITY CROSSINGS AND/OR BRIDGE REPLACEMENT OR REPAIRS (INCLUDING ABUTMENTS) CROSS PUBLIC ROADWAYS, THE BACKFILL REQUIRED WILL BE LOW STRENGTH MORTAR UNLESS OTHERWISE NOTED ON THE PLANS.

WHENEVER A CUT IN PAVEMENTS IS MADE FOR REMOVAL ITEMS, THE BACKFILL REQUIRED WILL BE LOW STRENGTH MORTAR. THE LIMITS OF THE BACKFILL SHALL BE 2' BEHIND THE CURB, AND FROM THE BASE OF THE CUT TO THE SUBGRADE.

ALL CUTS IN DRIVEWAYS SHALL BE BACKFILLED WITH LOW STRENGTH MORTAR. LIMITS OF BACKFILL SHALL BE THE WIDTH OF THE DRIVEWAY PLUS TWO FEET ON EACH SIDE.

LOW STRENGTH MORTAR BACKFILL WILL BE REQUIRED FOR ANY CUT IN PUBLIC ROADWAYS WHERE THE PAVEMENT HAS TO BE REMOVED.

THIS QUANTITY IS TO BE INCLUDED IN THE UNIT PRICE FOR THE OCCURRENCES AS DESCRIBED ABOVE.

ITEM SPECIAL – MAILBOX REMOVED AND RE-ERECTED
THIS WORK SHALL CONSIST OF REMOVING AND RE-ERECTING MAILBOX SUPPORTS AND MAILBOXES (EITHER SINGLE OR DOUBLE) INSTALLATION AT LOCATIONS ESTABLISHED BY THE ENGINEER. IF THE EXISTING SUPPORT CAN NOT BE SALVAGED, THE CONTRACTOR SHALL PROVIDE A NEW SUPPORT MEETING THE REQUIREMENTS DESCRIBED BELOW.

WOOD POSTS SHALL BE NOMINAL 4" BY 4" SQUARE OR 4 1/2" DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2" I.D., AND CONFORM TO AASHTO M181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03 AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION. IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER. THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY THE IMPROPER HANDLING ON HIS PART. AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

COST FOR THE ABOVE WORK SHALL BE PAID UNDER ITEM SPECIAL, MAILBOX REMOVED AND RE-ERECTED.

THE FOLLOWING ITEM HAS BEEN CARRIED OVER TO THE GENERAL SUMMARY:

ITEM SPECIAL – MAILBOX REMOVED AND RE-ERECTED, AS PER PLAN 15 EACH

GUARDRAIL SPLICE
CONTRACTOR SHALL SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL WITH A RAIL SPLICE AS PER STANDARD CONSTRUCTION DRAWING GR-2.1 PAYMENT FOR THIS ITEM SHALL BE INCIDENTAL TO ITEM 606 GUARDRAIL, TYPE 5, USING 9' POSTS.

CLEARING AND GRUBBING
IN ADDITION TO THE APPLICABLE REQUIREMENTS OF ITEM 201 THE FOLLOWING SHALL ALSO APPLY:

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	12	0	12
30"	2	0	2

CONCEPTUAL SEQUENCE OF CONSTRUCTION
THE FOLLOWING IS A CONCEPTUAL SEQUENCE OF CONSTRUCTION FOR THE BETHANY ROADWAY IMPROVEMENTS PROJECT. IT IS INTENDED TO PROVIDE A BASIC SCHEDULE TO FACILITATE THE SMOOTH COMPLETION OF THE IMPROVEMENTS. IT IS NOT INTENDED TO BE "ALL INCLUSIVE". THE CONTRACTOR CAN SUBMIT AN ALTERNATE MAINTENANCE OF TRAFFIC PLAN TO THE OWNER FOR APPROVAL. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED SIGNS, CONSTRUCTION DRUMS, BARRIERS, AND PAVEMENT MARKINGS NECESSARY TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THE OMUTCD AND THE REQUIREMENTS OF THE BUTLER COUNTY ENGINEERS OFFICE.

LOCAL PROPERTY OWNER ACCESS MUST BE MAINTAINED AT ALL TIMES.

PERFORM UTILITY RELOCATION OR INSTALLATIONS PRIOR TO AND DURING ROADWAY CONSTRUCTION, BY OTHERS.

PHASE ONE CONSTRUCTION
CLOSE LIBERTY COURT TO LOCAL TRAFFIC.

CONSTRUCT FULL DEPTH PAVEMENT ON LIBERTY COURT STA. 51+42 TO STA. 56+30±.

CONSTRUCT PERMANENT DRIVEWAYS TO ADJACENT OWNERS.

PHASE TWO CONSTRUCTION
OPEN LIBERTY COURT TO LOCAL TRAFFIC.

CLOSE BETHANY ROAD TO THRU TRAFFIC.

CONSTRUCT FULL DEPTH PAVEMENT ON BETHANY ROAD STA. 20+50 TO STA. 30+80.

CONSTRUCT PERMANENT DRIVEWAYS TO ADJACENT OWNERS.

PERFORM FINAL GRADING, SEEDING AND MULCHING.

PHASE THREE CONSTRUCTION
OPEN BETHANY ROAD EAST OF LIBERTY COURT.

CONSTRUCT FULL DEPTH PAVEMENT ON BETHANY ROAD STA. 12+67 TO STA. 20+50.

CONSTRUCT FULL DEPTH PAVEMENT ON CINCINNATI-DAYTON ROAD.

CONSTRUCT PERMANENT DRIVEWAYS TO ADJACENT OWNERS.

PHASE FOUR CONSTRUCTION
OPEN BETHANY ROAD TO THRU TRAFFIC.

CONSTRUCT FINAL SURFACE COURSE OVER PROJECT.

PLACE ALL PAVEMENT MARKING AND SIGNAGES.

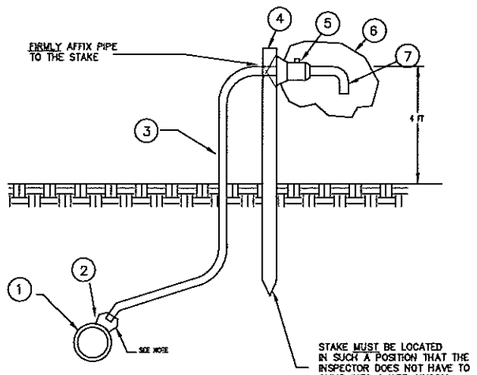
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BETHANY ROAD ROADWAY IMPROVEMENTS
GENERAL NOTES & MAINTENANCE OF TRAFFIC NOTES

KLEINGERS & ASSOCIATES
ENGINEERS & SURVEYORS
8163 Corporate Park Drive
Cincinnati, Ohio 45242
513-779-7851 Fax: 513-779-7852

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BILL OF MATERIALS

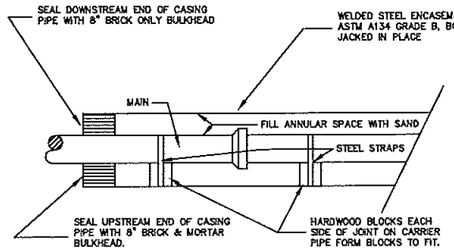
1. WATER MAIN
2. CORPORATION STOP
3. SERVICE PIPE (POLYBUTYLENE)
4. STURDY STAKE
5. 3/4" CURB STOP
6. PLASTIC "BAGGY" W/ TWIST TIE (NO TAPE)
7. 3/8" COPPER (6" TO 8" LONG-BENT DOWN)

NOTE DURING FREEZING CONDITION THE LINE WILL BE DRAINED AT THE CORP. STOP AND RETIGHTENED, THEN RE ACTIVATED BY THE CONTRACTOR'S PERSONNEL AT THE TIME OF THE TEST.

PURITY TEST STATION

NOT TO SCALE

NOTE
CONTRACTOR SHALL SUBMIT FOR APPROVAL SHOP DRAWING DETAILING THE TYPE OF AUGER STOP TO BE USED AT EACH BORE AND JACK LOCATION.

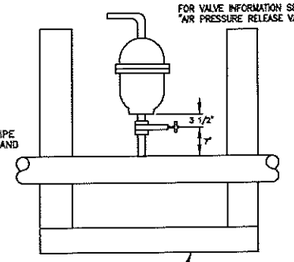


LOCATION	①	②	③	SHEET NO.

① ENCASEMENT PIPE SIZE
② ENCASEMENT PIPE WALL THICKNESS
③ MAIN SIZE

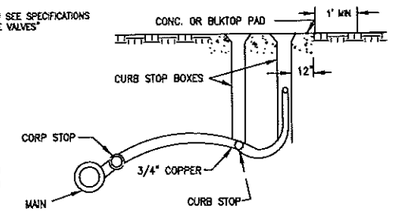
ENCASEMENT PIPE DETAIL

NOT TO SCALE



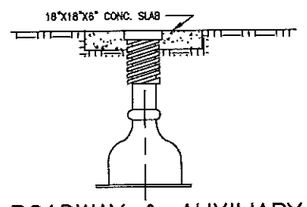
AIR RELEASE VALVE

NOT TO SCALE



AIR RELEASE COCK

NOT TO SCALE



ROADWAY & AUXILIARY VALVE BOX DETAIL

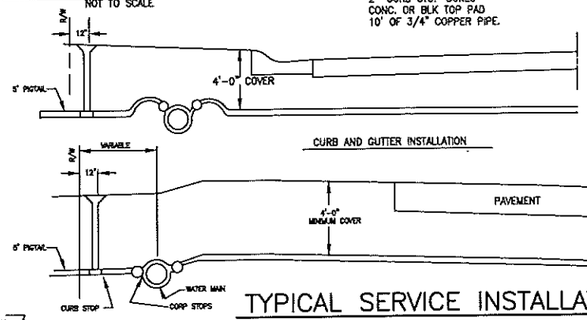
NOT TO SCALE

MATERIAL
1 CORPORATION STOP
1 CURB STOP
2 CURB STOP BOXES
CONC. OR BLK TOP PAD
10' OF 3/4" COPPER PIPE.

ROADWAY AND AUXILIARY VALVE BOXES SHALL BE CAST IRON. BUFFALO PATTERN 5 1/4" DIA SHAFT, THREE PIECE SCREW TYPE ADJUSTABLE. COVER SHALL BE MARKED "WATER".

BOXES SHALL BE ORDERED TO PROPERLY MEET DEPTH REQUIREMENTS. VALVES WITH DEPTHS 7 FT AND OVER ARE TO BE PROVIDED VALVE BOX EXTENSIONS. ALL VALVE BOXES SHALL BE SET AT FINISH GRADE ELEVATIONS AND PROTECTED BY 18"X18"X6" CONCRETE SLABS.

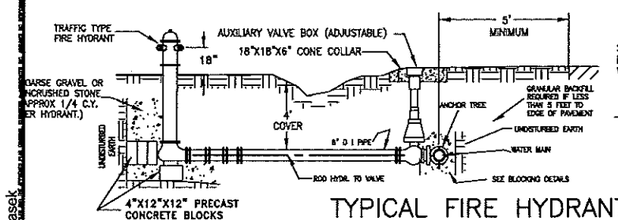
NO VALVE SHALL BE LOCATED NEAR THE FLOW LINE OF EXISTING OR PROPOSED DRAINING DITCHES.



TYPICAL SERVICE INSTALLATION

NOT TO SCALE

※ AS SPECIFIED IN THE CONTRACT DOCUMENT



TYPICAL FIRE HYDRANT INSTALLATIONS

NOT TO SCALE

NOTES
ALL FIRE HYDRANTS SHALL BE RODDED AND SET ON A LARGE FLAT STONE OR CONCRETE BLOCK. THE RODS SHALL BE GIVEN A PROTECTIVE BITUMINOUS COATING

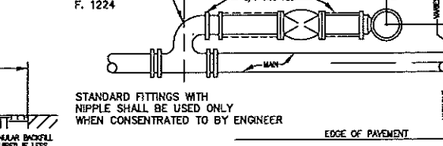
HYDRANTS SHALL BE OF THE TOP QUALITY OF THE MANUFACTURER.

CONCRETE BLOCK BE EVENLY AND FIRMLY BEDDED AGAINST FIRM EARTH BACKING AND BEDDED IN SAND IF DIRECTED BY THE ENGINEER.

AUXILIARY VALVES SHALL BE USED IN ALL INSTALLATIONS. AUXILIARY VALVES AND VALVE BOXES ARE PAID FOR UNDER THE APPROPRIATE ITEM AND ARE NOT INCLUDED IN THE FIRE HYDRANT ITEM FOR PAYMENT.

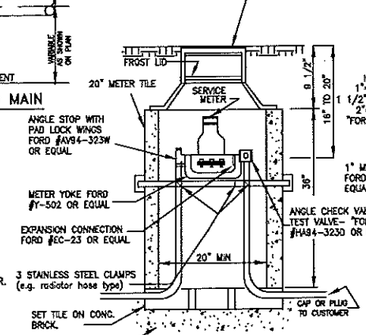
NO VALVES OR FIRE HYDRANTS SHALL BE LOCATED NEAR THE FLOW LINE OF EXISTING OR PROPOSED DITCHES.

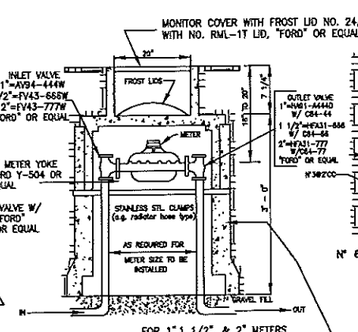
FIRE HYDRANT LEADS CROSSING ROADSIDE DITCHES SHALL HAVE 4'-0" MIN COVER.



SETTING FOR FIRE HYDRANT ADJACENT TO MAIN

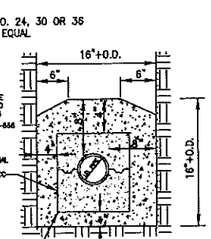
DOUBLE LID METER BOX COVER WABASH NO WA-3LT MANUFACTURED BY "FORD" METER BOX CO. OR EQUAL





STANDARD METER SETTINGS

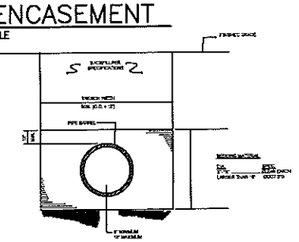
NOT TO SCALE



CONCRETE MAIN ENCASEMENT

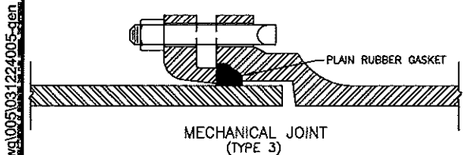
NOT TO SCALE

PIPE SIZE	C.Y. CONC. PER LIN FT.	NO 6 BARS PER FT OF ENCASEMENT	LENGTH OF NO. 3 BARS	NO. 3 BARS PER FT OF ENCASEMENT
6"	0.121	1.502	3'-3"	0.61
8"	0.139	"	4'-3"	0.80
10"	0.157	"	4'-9"	0.89
12"	0.177	"	5'-3"	0.98
16"	0.200	"	6'-3"	1.17
18"	0.247	"	6'-10"	1.28
20"	0.270	"	7'-6"	1.39
24"	0.315	"	8'-6"	1.59

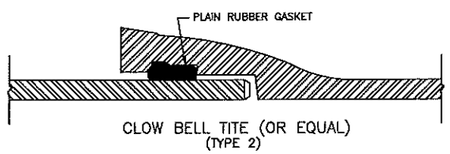


TYPICAL TRENCH DETAIL WATER MAIN INSTALLATION

NTS



MECHANICAL JOINT (TYPE 3)



CLOW BELL TITE (OR EQUAL) (TYPE 2)

PIPE JOINTS

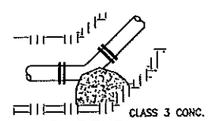
NOT TO SCALE

MAXIMUM DEFLECTIONS FOR MECHANICAL JOINT PIPE			
Size	Based on 18' Length		Radii of Curve
	Angle	Deflection	
6"	7: 07	27"	145'
8",10",12"	5' 21	20"	195'

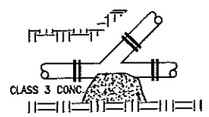
MAXIMUM DEFLECTIONS FOR PUSH ON TYPE PIPE			
Size	Based on 18' Length		Radii of Curve
	Angle	Deflection	
6",8" 10",12"	5'	19"	205'

NOTE: STANDARD BENDS SHALL BE USED WHERE RADII ARE LESS THAN THOSE SHOWN IN TABLE.

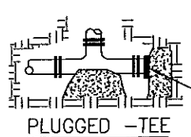
FOR PIPE GREATER THAN 12" SEE THE CONTRACT DOCUMENT SECTION 9 38.



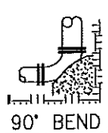
45° BEND



WYE.



PLUGGED -TEE



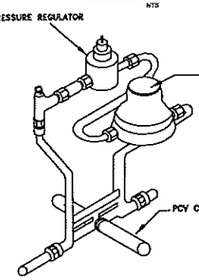
90° BEND

BLOCKING DETAILS

NOT TO SCALE

ESTIMATED AMOUNT OF CONC. FOR BLOCKING PIPE JOINTS	
DESCRIPTION	CU. FT.
6" TO 12" TEES	7
" " " " Y'S	4
" " " " BENDS	3
" " " " CROSSES	5
16" & 18" TEES	12
" " " " Y'S	9
" " " " BENDS	7
" " " " CROSSES	14
20" & 24" TEES	20
" " " " Y'S	10
" " " " BENDS	8
" " " " CROSSES	22

NOTE: BASE AREA OF CONCRETE BLOCKING TO BE DETERMINED BY ENGINEER FROM SIZE AND PRESSURE IN PIPE AND PERMISSIBLE BEARING CAPACITY OF SOIL. NO EXTRA PAYMENT WILL BE MADE FOR CONCRETE WHERE IT IS NECESSARY TO USE MORE THAN IS SHOWN IN TABLE.



DUCTILE IRON	
STD THICKNESS IN	
SIZE	CLASS 53
4"	0.32
6"	0.34
8"	0.36
10"	0.38
12"	0.40

CALCULATED GAU
CHECKED TSC

BETHANY ROAD ROADWAY IMPROVEMENTS
WATER DETAILS

KLEINGERS & ASSOCIATES
ENGINEERS PLANNERS SURVEYORS
8200 Zionsville Road Suite 200
Indianapolis, IN 46268
317-879-4660 Fax: 317-879-7682

8
56

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ITEM NO.	ITEM DESCRIPTION	BETHANY RD. QTY	LIBERTY CT. QTY	CINCINNATI-DAYTON RD. QTY	TOTAL QTY	UNIT
	ROADWAY					
201	CLEARING AND GRUBBING, AS PER PLAN	62%	28%	10%	1	LUMP
202	PAVEMENT REMOVED	398	1342	70	1810	SQ YD
202	PAVEMENT REMOVED, CONCRETE DRIVE	37	0	82	119	SQ YD
202	PAVEMENT REMOVED, ASPHALT DRIVE	79	0	0	79	SQ YD
202	CURB REMOVED	0	978	348	1326	FT
202	WALK REMOVED	51	338	671	1060	FT
202	STRUCTURE REMOVED	4	0	0	4	EACH
202	PIPE REMOVED, 24" AND UNDER	495	0	127	622	FT
202	GUARDRAIL REMOVED	261	0	0	261	FT
202	CATCH BASIN REMOVED	1	1	5	7	EACH
202	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	0	0	1	1	EACH
203	EXCAVATION	678	405	185	1268	CY
203	EMBANKMENT	1546	297	24	1867	CY
204	SUBGRADE COMPACTION	3904	1863	666	6433	SQ YD
604	MANHOLE RECONSTRUCT TO GRADE	0	0	2	2	EACH
604	MANHOLE ADJUSTED TO GRADE	0	1	0	1	EACH
606	GUARDRAIL, TYPE 5, USING 9' POSTS	238	0	0	238	FT
606	ANCHOR ASSEMBLY, TYPE E-98	1	0	0	1	EACH
SPECIAL	MAILBOX REMOVED AND RE-ERECTED	12	0	3	15	EACH
	EROSION CONTROL					
659	SEEDING AND MULCHING	3716	841	197	4754	SQ YD
	PAVEMENT					
301	9" BITUMINOUS AGGREGATE BASE	866	391	116	1373	CU YD
301	4" BITUMINOUS AGGREGATE BASE	19	0	0	19	CU YD
407	TACK COAT FOR INTERMEDIATE COURSE	310	42	47	399	GAL
448	*1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1	243	56	16	315	CU YD
448	1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (DRIVEWAYS)	5	0	0	5	CU YD
448	1-1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2	131	59	19	209	CU YD
448	*VARIABLE DEPTH ASPHALT CONCRETE INTERMEDIATE LEVELING COURSE.	80	0	0	80	CU YD
451	6" NON-REINFORCED CONCRETE	3	0	10	13	CU YD
608	CURB RAMP	3	1	1	5	EACH
608	4" CONCRETE WALK	73	2461	714	3248	SQ FT
608	6" CONCRETE WALK	3432	0	0	3432	SQ FT
608	6" CONCRETE WALK INTEGRAL WITH TYPE 6 CURB	235	0	0	235	SQ FT
609	COMBINATION CURB AND GUTTER, TYPE 2	0	1014	0	1014	FT
609	CONCRETE CURB , TYPE 6	0	0	339	339	FT

ITEM NO.	ITEM DESCRIPTION	BETHANY RD. QTY	LIBERTY CT. QTY	CINCINNATI-DAYTON RD. QTY	TOTAL QTY	UNIT
	DRAINAGE					
602	CONCRETE MASONRY	7.1	0	0	7.1	EACH
603	12" CONDUIT, TYPE B	480	66	132	678	FT
603	15" CONDUIT, TYPE B	130	0	0	130	FT
604	MANHOLE NO. 3	0	0	1	1	EACH
604	CATCH BASIN NO. 2-2B	5	0	2	7	EACH
604	CATCH BASIN NO. 3A	0	2	0	2	EACH
604	CATCH BASIN NO. 3	0	0	2	2	EACH
	MISCELLANEOUS				0	
614	MAINTENANCE OF TRAFFIC, AS PER PLAN	62%	28%	10%	1	LUMP
623	CONSTRUCTION LAYOUT	62%	28%	10%	1	LUMP
625	MOBILIZATION	62%	28%	10%	1	LUMP
	TRAFFIC CONTROL					
621	RAISED PAVEMENT MARKER	68	0	0	68	EACH
630	SIGN, FLAT SHEET, TYPE G, AS PER PLAN	70	15.5	6.25	91.75	SQ FT
630	GROUND MOUNTED SUPPORT, NO. 3 POST	112.5	33	11.5	157	FT
644	CENTERLINE	0.42	0.02	0	0.44	MILE
644	EDGE LINE	0.31	0	0.06	0.37	MILE
644	CHANNELIZING LINE	525	100	245	870	FT
644	STOP LINE	18	34	0	52	FT
644	CROSSWALK, 12" WHITE	102	0	173	275	FT
644	CROSSWALK, 24" WHITE	70	0	0	70	FT
644	LANE ARROWS	9	4	3	16	EACH
644	WORD ON PAVEMENT	2	1	0	3	EACH
625	LUMINAIRE CONVENTIONAL, AS PER PLAN	1	0	0	1	EACH
625	30' BRACKET ARM, CLAMP-ON STYLE, AS PER PLAN	1	0	0	1	EACH
625	No. 10 600 VOLT DISTRIBUTION CABLE	75	0	0	75	FT
625	POWER SERVICE, AS PER PLAN	1	0	0	1	EACH
625	GROUND ROD	2	0	0	2	EACH
630	SIGN FLAT SHEET, TYPE G	18	0	0	18	SQ FT
630	SIGN HANGER ASSEMBLY, SPAN WIRE	2	0	0	2	EACH
632	STRAIN POLE FOUNDATION, AS PER PLAN	2	0	0	2	EACH
632	STRAIN POLE, TYPE TC-81.10, DESIGN 5, INSTALLATION ONLY	2	0	0	2	EACH
632	MESSANGER WIRE, 7-STRAND, 3/8" DIAMTER, WITH ACCESSORIES	136	0	0	136	FT
	WATER					
202	VALVE BOX REMOVED	1	0	0	1	EACH
638	FIRE HYDRANT REMOVED	1	0	0	1	EACH
638	FIRE HYDRANT REMOVED & RESET	3	0	0	3	EACH
639	FIRE HYDRANT ADJUSTED TO GRADE	1	0	0	1	EACH
638	METER BOX ADJUSTED TO GRADE	3	0	0	3	EACH
638	VALVE BOX ADJUSTED TO GRADE	8	0	1	9	EACH

CALCULATED GAU
CHECKED NMM

BETHANY ROAD ROADWAY IMPROVEMENTS
GENERAL SUMMARY

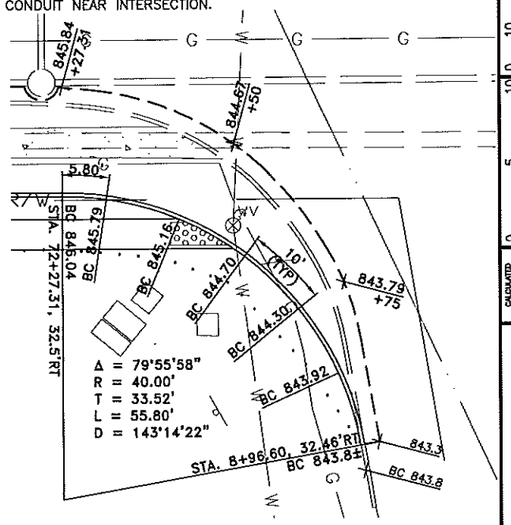
KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
8621 Dow Circle, Strongsville, OH 44136
Phone: 440-238-0030 Fax: 440-238-1154

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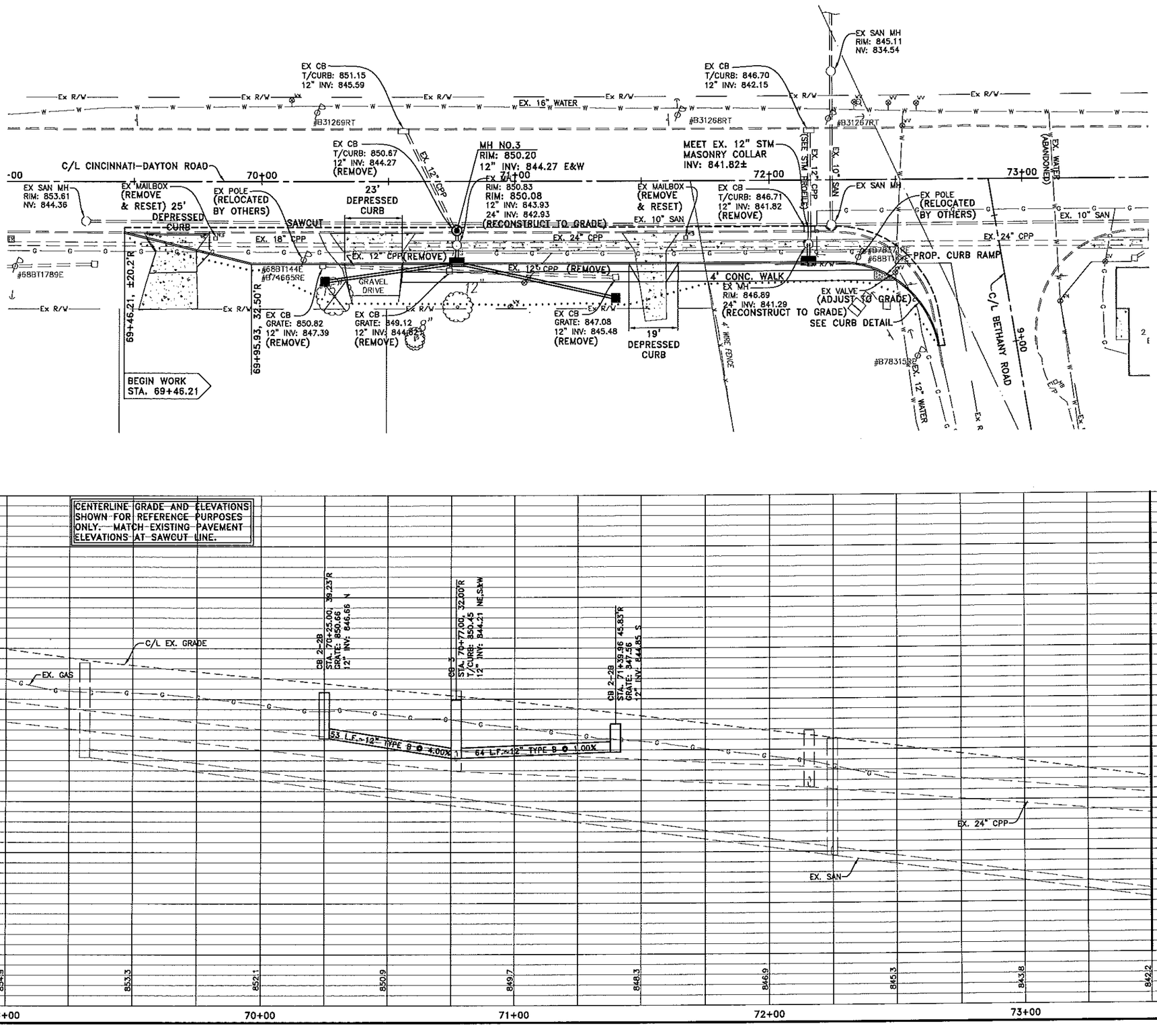
NOTES:
"BC" REFERS TO TOP/BACK OF CURB ELEVATION AND/OR LOCATION.

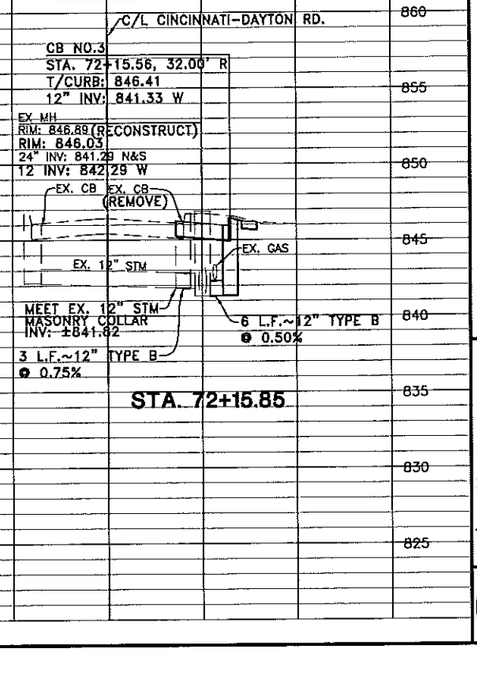
BACK OF CURB ELEVATIONS DO NOT ACCOUNT FOR CURB DEPRESSIONS AT RAMPS. ADJUST AS NECESSARY.

CONTRACTOR SHALL EXCERCISE CAUTION DURING CONSTRUCTION AROUND SIGNAL EQUIPMENT TO AVOID DAMAGE TO BURIED SIGNAL CONDUIT NEAR INTERSECTION.



CURB DETAIL
SCALE: 1"=10'



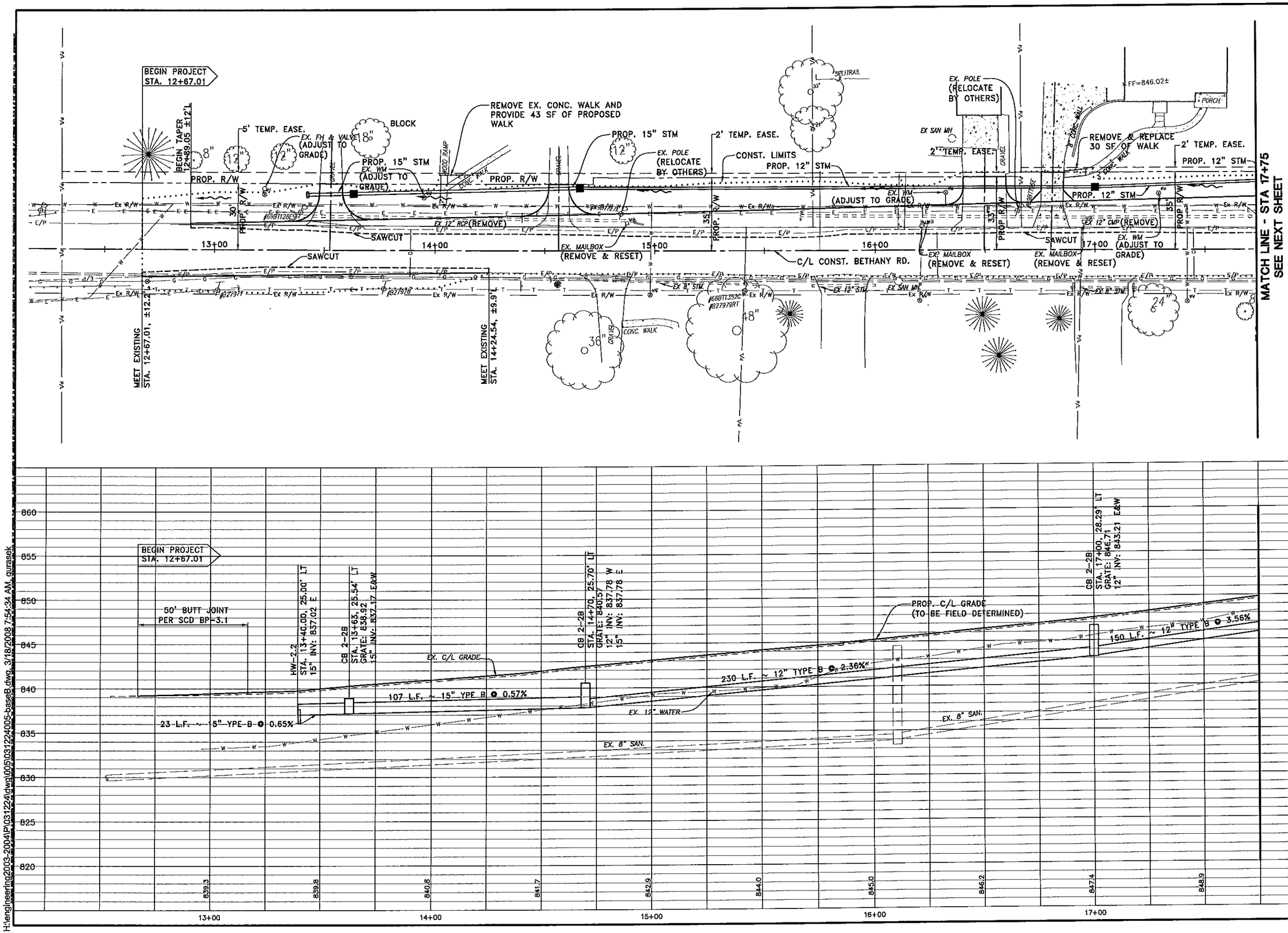


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HORIZONTAL SCALE IN FEET 0 10 20 40
VERTICAL SCALE IN FEET 0 5 10
CALCULATED GAU CHECKED NMM

CINCINNATI-DAYTON ROAD
PLAN & PROFILE - STA. 69+00 TO STA. 73+50

KLEINGERS & ASSOCIATES
Engineers and Surveyors
8000 Corporate Park Drive
West Chester, OH 45069
513-779-7851 Fax: 513-779-7852



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HORIZONTAL SCALE IN FEET
0 10 20 40

VERTICAL SCALE IN FEET
0 5 10

CALCULATED GAU
CHECKED NMM

BETHANY ROAD
PLAN & PROFILE - STA. 12+50 TO STA. 17+75

KLEINGERS & ASSOCIATES
ENGINEERS & SURVEYORS
Wilsonville, Oregon 97070
503-570-0800 Fax: 503-570-0855

MATCH LINE - STA 17+75
SEE PREVIOUS SHEET

MATCH LINE - STA 22+75
SEE NEXT SHEET

EX. VALVE (ADJUST TO GRADE)
PROP. R/W
EX. FH (REMOVE & RESET)
STONE WALL (REMOVE)
EX 12" CMP (REMOVE)
SAWCUT
C/L CONST. BETHANY RD.
#B279BRT
#B897J35C
EX. POLE (RELOCATE BY OTHERS)
PAVER WALK
GRAVEL
STONE WALL
BELL
#B3812RT
EX. SAN MH
PORCH
2 STORY FRAME
END TAPER STA. 18+93.35, 27' LT.
15' TEMP. EASE
CONST. LIMITS
PROP. 12" STM
PROP. R/W
40'
EX. MAILBOX (REMOVE & RESET)
#B971-12E
EX. WATER (ABANDONED)
PROP. STRAIN POLE. SEE SHEET 49 FOR DETAIL.
STA. 20+64.41, 11.8' RT. MEET EX. E/P
EUGENE & TERRI L. VANCE
O.R. 6467, PG. 2286
1.25 ACRES (ORIGINAL)
PROP 10' PATH
STA. 21+17.24 BETHANY RD. = STA. 56+40.75 LIBERTY CT.
EX. VALVE (TO BE ADJUSTED)
PROP. CURB RAMP
STA. 20+68.67, 27' LT.
EX. WALK
SCHOOL DRIVE
SAWCUT
90°35'14"
88°42'34"
EX. POLE (RELOCATE BY OTHERS)
#B981-12E
EX. VALVE (TO BE ADJUSTED)
EX. MAILBOX (REMOVE & RESET)
STA. 21+76.66, 11.4' RT. MEET EX. E/P
STA. 21+20.29 BETHANY RD. = PROP. SCHOOL DRIVE
STA. 21+74.97, 39' LT.
1~12" 45° BEND
31 LF CLASS 53 D.I.P. 12" WATERMAIN (RESTRAIN ALL JOINTS)
CONST LIMITS
PROP. R/W
PROP 10' PATH
EX. FH (REMOVE & RESET)
EX. FH (REMOVE)
EX. WY (BURY)
#36481
RENEGADE ENTERPRISES, LLC
O.R. 6836, PG. 391
0.50 ACRES
C/L CONST. LIBERTY CT.
#B981-12SE
EX. WATER
EX. MAILBOX (REMOVE & RESET)
18+00
19+00
20+00
21+00
22+00

CB 2-2B
STA. 18+50, 33.82' LT
GRATE: 851.56
12" INV: 848.56 E&W

CB 2-2B
STA. 19+50, 33.31' LT
GRATE: 856.70
12" INV: 853.70 W

100 L.F. ~ 12" TYPE B @ 5.14%

EX. C/L GRADE
PROP. C/L GRADE (TO BE FIELD DETERMINED)
EX. GAS
EX. 12" WATER
EX. 6" WATER
EX. 8" SAN.
EX. 8" SAN.

850.6 852.8 855.2 857.7 859.7 861.2 862.2 852.8 853.4 864.0

875 870 865 860 855 850 845 840 835

HORIZONTAL SCALE IN FEET
0 10 20 40

VERTICAL SCALE IN FEET
0 5 10

CALCULATED GAU
CHECKED NMM

BETHANY ROAD
PLAN & PROFILE - STA. 17+75 TO STA. 22+75

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
8309 Cooks Park Drive
Middletown, Ohio 45042
513-779-7851 Fax: 513-779-7852

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*NOTE:
BEFORE THE AUXILIARY VALVE IS TO BE CLOSED, THE CONTRACTOR SHALL POUR A CONCRETE "DEADMAN" ON THE WEST SIDE OF THE VALVE, AND RESTRAIN VALVE TO "DEADMAN" USING THREADED RODS AND BOLTS.

MATCH LINE - STA 22+75
SEE PREVIOUS SHEET

MATCH LINE - STA 27+75
SEE NEXT SHEET

STA. 23+49.79, 39.65' LT.
BEGIN TAPER
STA. 23+99.86, 27.86' LT.

PROP. R/W
CONST LIMITS
EX. POLE (RELOCATE BY OTHERS)
EX. POLE (REMOVE BY OTHERS)
EX. MAILBOX (REMOVE & RESET)
1~6" 45° BEND
22 LF CLASS 53 6" D.I.P. (RESTRAIN ALL JOINTS)
1~6" 45° BEND
EX. VALVE (ADJUST TO GRADE)
EX. FH (REMOVE & RESET)
EX. MAILBOX (REMOVE & RESET)
SAWCUT
SAWCUT
C/L CONST. BETHANY RD.
EX. 12" STM.
EX SAN MH
EX SAN MH
GRAVEL DRIVE
8" BLOCK WALL
Ex R/W
E/P
23+00
24+00
25+00
26+00
27+00

PROP. C/L GRADE (TO BE FIELD DETERMINED)
EX. C/L GRADE
EX. GAS
EX. 6" WATER
EX. 8" SAN.
EX. 9" SAN.

885
880
875
870
865
860
855
850
845

854.7 865.4 865.9 866.1 866.0 865.9 866.2 866.7 867.6 868.8

23+00 24+00 25+00 26+00 27+00

DESIGNED NMM
DRAWN GAU

BETHANY ROAD
PLAN & PROFILE - STA. 22+75 TO STA. 27+75

HORIZONTAL SCALE IN FEET 0 10 20 40
VERTICAL SCALE IN FEET 0 5 10

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
8282 Cobble Park Drive
West Chester, OH 45069
513-779-7851 Fax: 513-779-7852

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MATCH LINE - STA 27+75
SEE PREVIOUS SHEET

30" INV.=858.10
EX. 30" STM.
PROP HW-1.1
TYPE E-98 ANCHOR ASSEMBLY
238 L.F. TYPE 5 GUARDRAIL
SAWCUT
END PROJECT STA. 30+79.50
MEET EX. PAVEMENT
MEET EX. GUARDRAIL
END TAPER ±11' LT.
28+00
29+00
30+00
31+00
32+00
C/L CONST. BETHANY RD.
WELLSPRING SIGN
8" BLOCK WALL
30" INV.=856.93
WATER METER PIT
#698T-280E
#698T-281E
#810-262T
#827984
#850885
Ex R/W
E/P
T
UE

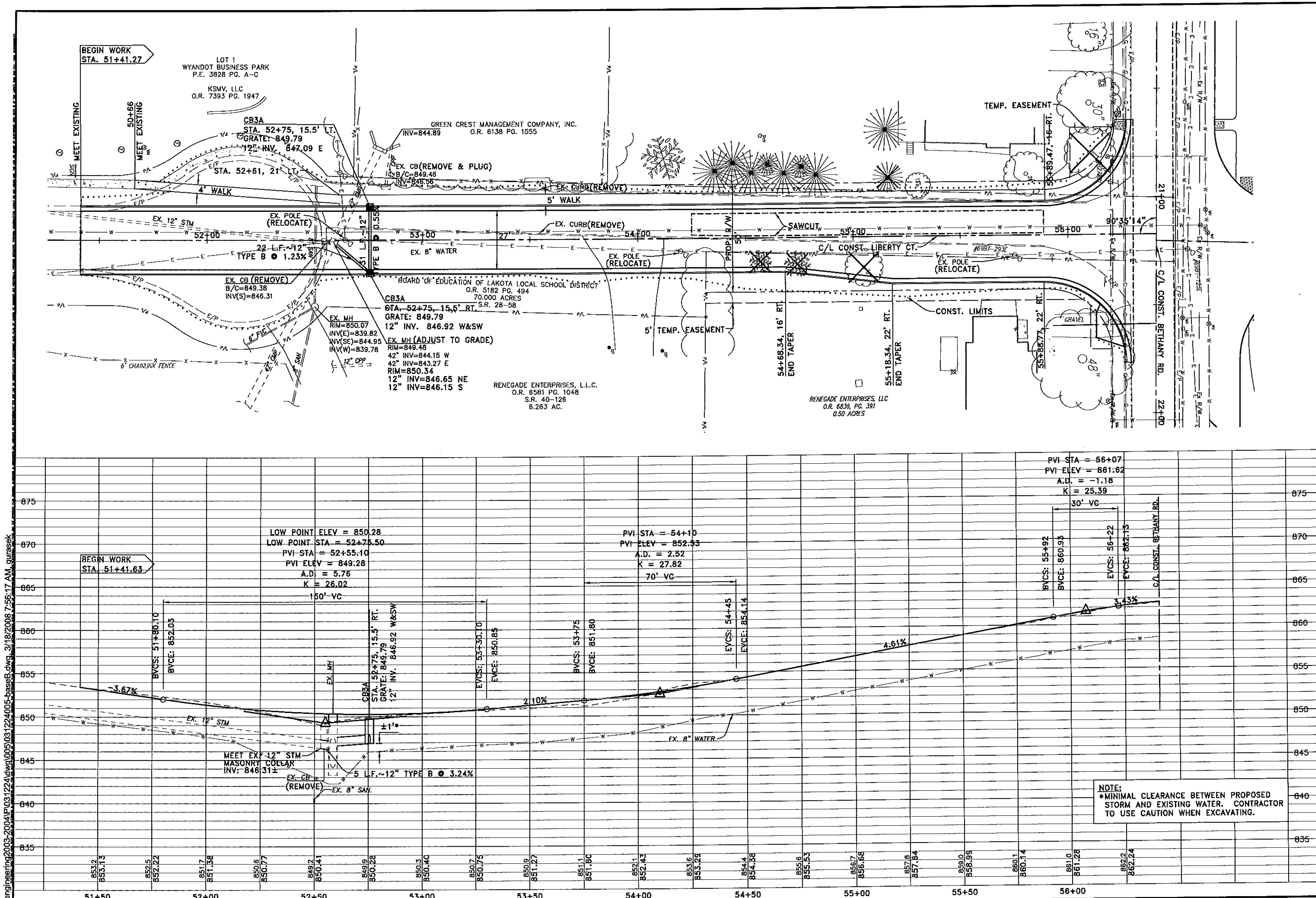
END PROJECT STA. 30+79.50
50' BUTT JOINT PER SCD BP-3.1
PROP. C/L GRADE (TO BE FIELD DETERMINED)
EX. C/L GRADE
EX. 30" STM.
890
885
880
875
870
865
860
855
850
870.2
871.9
874.1
876.4
878.7
880.9
883.2
885.2
887.1
888.6

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HORIZONTAL SCALE IN FEET
0 10 20 40
VERTICAL SCALE IN FEET
0 5 10
CALCULATED GAU
CHECKED NMM

BETHANY ROAD
PLAN & PROFILE - STA. 27+75 TO END

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8162 Corporate Park Drive
Mason, OH 45040
513-779-7851 Fax: 513-779-7852



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HORIZONTAL SCALE IN FEET: 0 10 20 40

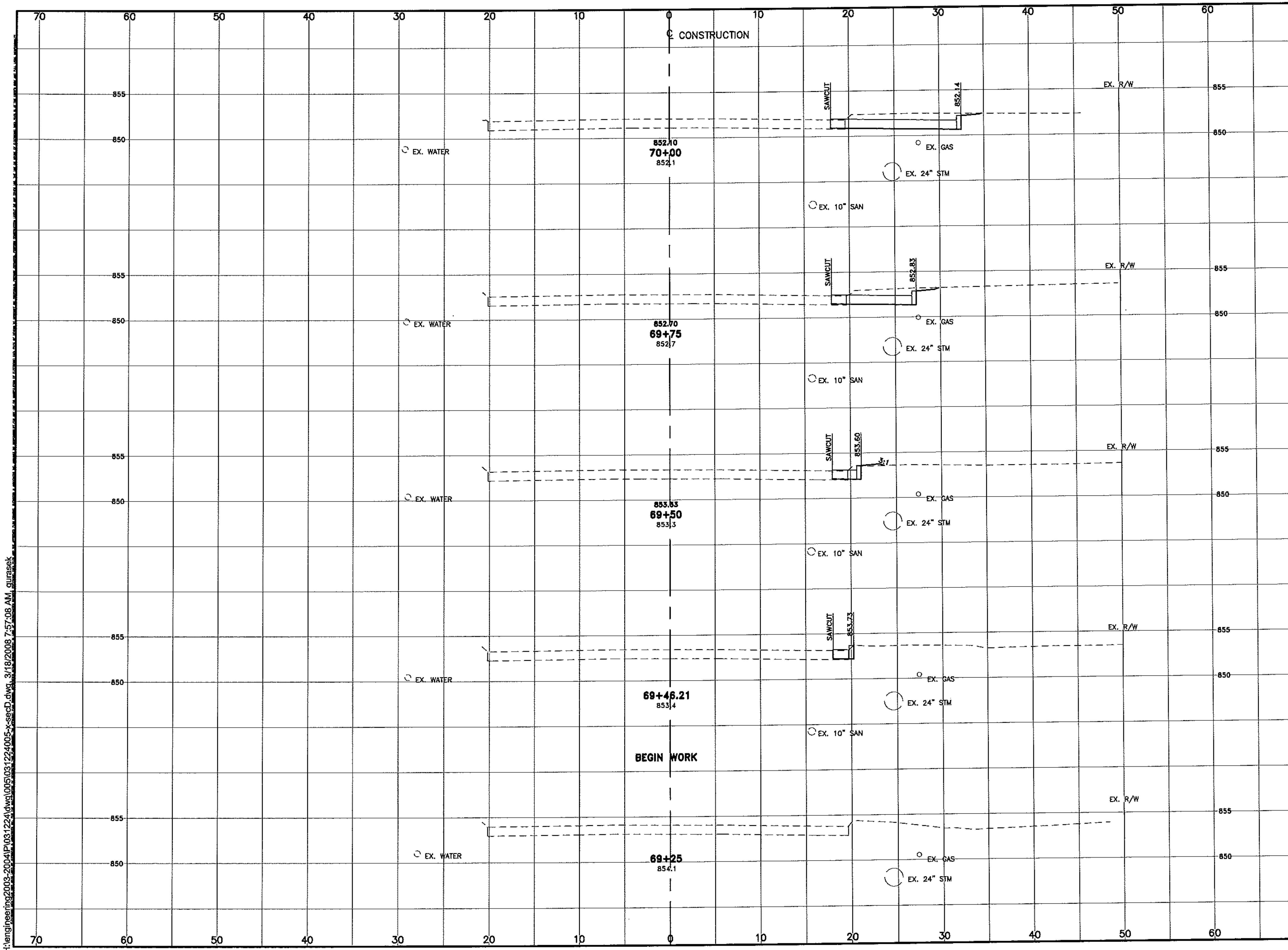
VERTICAL SCALE IN FEET: 0 5 10

CALCULATED: GAU
CHECKED: NMM

LIBERTY COURT
PLAN & PROFILE - STA. 51+25 TO END

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
6305 Centre Park Drive
West Chester, OH 45069
513-779-7851 Fax 513-779-7852

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END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
21.1	0.2		
		16	0
12.8	0.2		
		7	0
1.9	0.6		
		0	0
0.7	0.2		
		0	0
0.0	0.0		
SHEET TOTAL		23	0

HORIZONTAL SCALE IN FEET 0 5 10

VERTICAL SCALE IN FEET 0 5 10

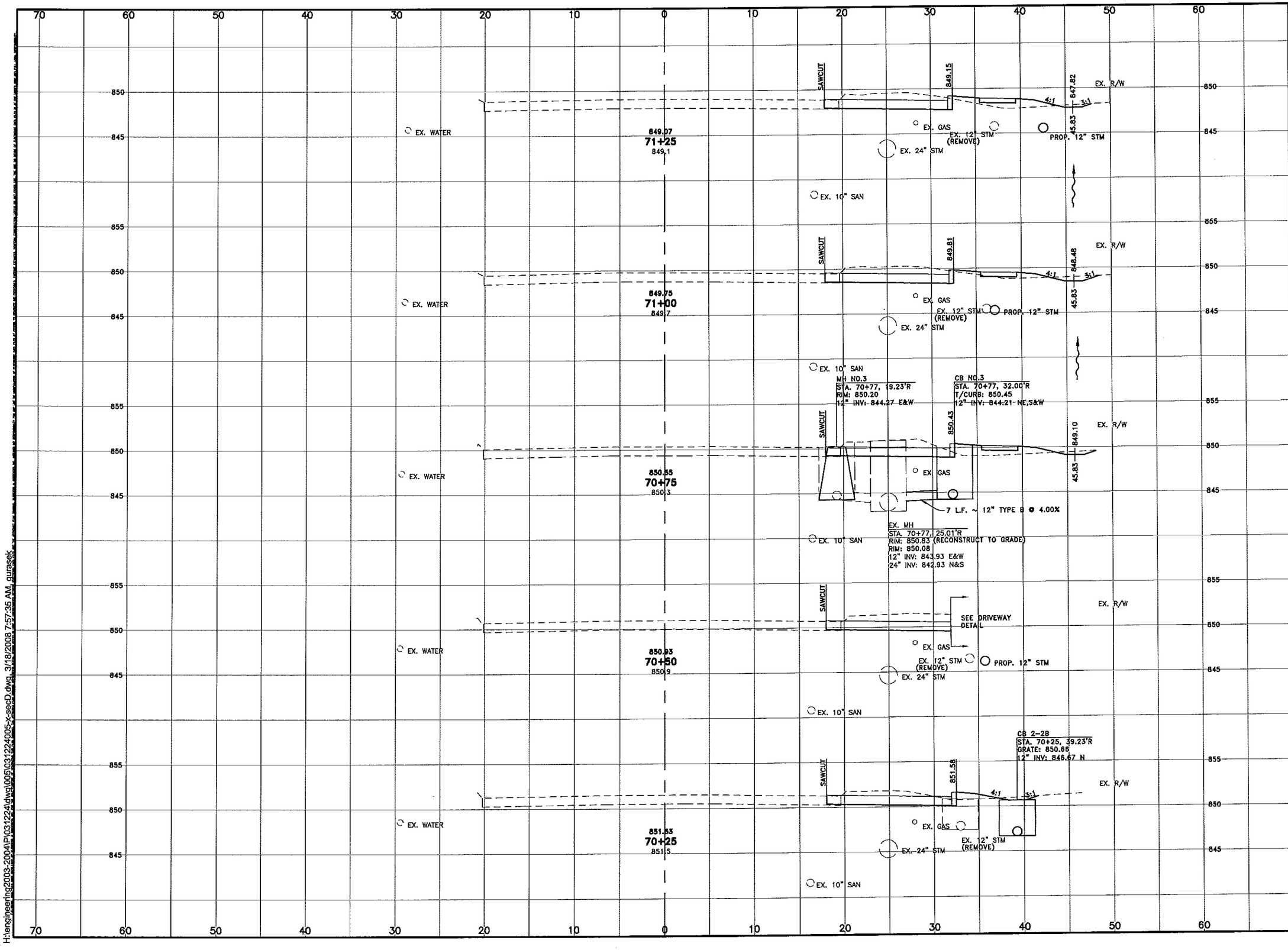
CALCULATED SJB

CHECKED NMM

CROSS SECTIONS - CINCINNATI-DAYTON ROAD
STA. 69+25 TO STA. 70+00

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
20.8	6.6		
		20	5
23.0	3.1		
		16	6
11.3	8.4		
		11	5
12.3	0.2		
		13	1
16.4	2.4		
		17	1
SHEET TOTAL		77	18

HORIZONTAL SCALE IN FEET: 0 5 10

VERTICAL SCALE IN FEET: 0 5 10

CALCULATED SJB

CHECKED NMM

CROSS SECTIONS - CINCINNATI-DAYTON ROAD STA. 70+25 TO STA. 71+25

KLEINGERS & ASSOCIATES
ENGINEERS & SURVEYORS
4200 Regent Street, Suite 200
Columbus, OH 43219
614-755-1500 Fax: 614-755-1501

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
22.4	0.2		
		2	0
22.9	0.2		
		22	0
23.8	0.2		
		22	0
22.7	0.2		
		20	0
20.4	0.2		
		19	4
SHEET TOTAL		85	4
ROAD TOTAL		185	22

HORIZONTAL SCALE IN FEET: 0 5 10

VERTICAL SCALE IN FEET: 0 5 10

CALCULATED SJB

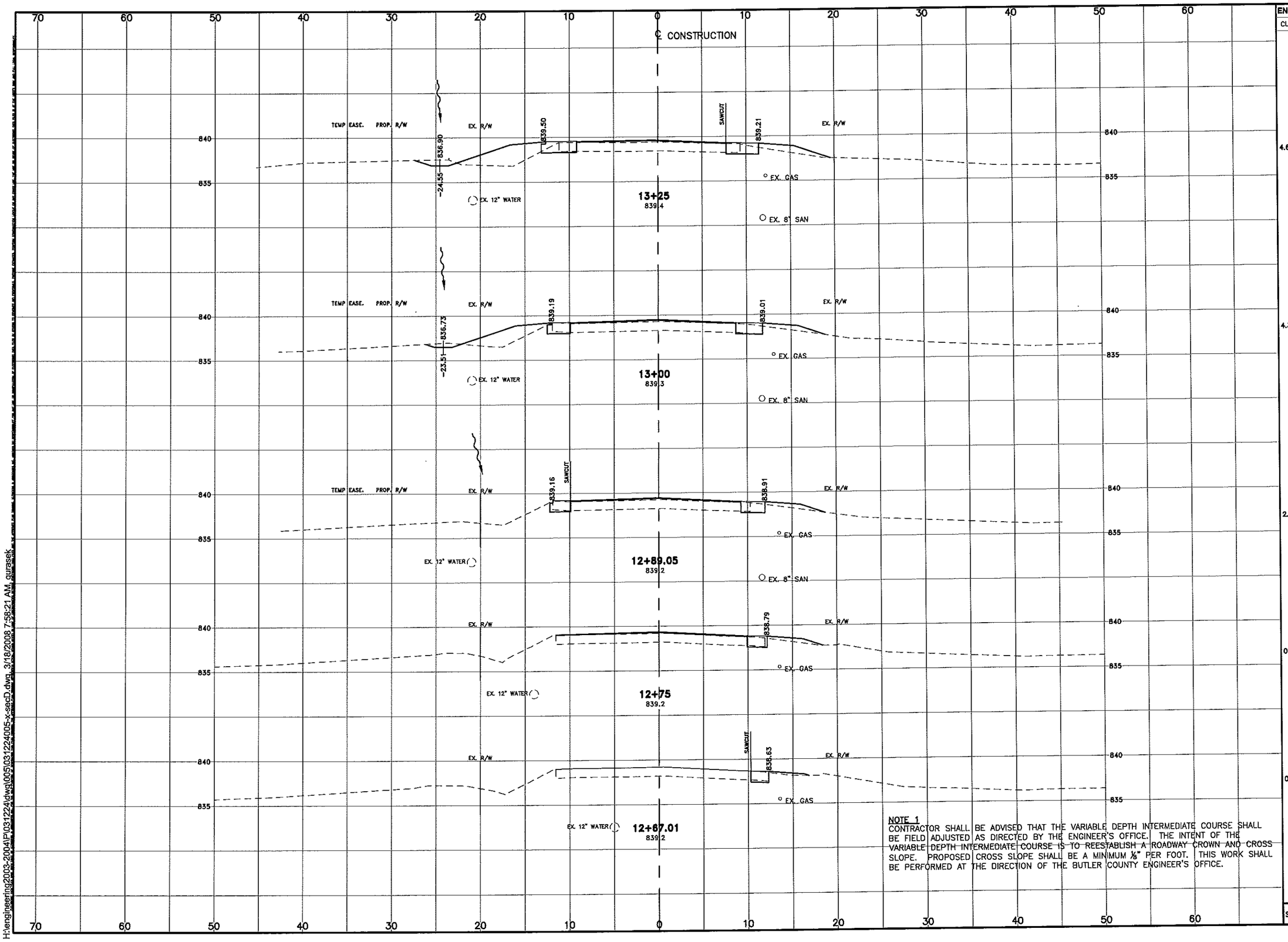
CHECKED NMM

CROSS SECTIONS - CINCINNATI-DAYTON ROAD
STA. 71+50 TO STA. 72+27.31

KLEINGERS & ASSOCIATES
Engineers and Architects
Main Office
Dayton, OH 45449
937-775-7651 Fax: 937-775-7652

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		4	13
4.6	18.6		
		4	17
4.3	13.3		
		1	4
2.6	2.4		
0.5	2.1	1	1
0.2	0.9	0	0
SHEET TOTAL		10	35

HORIZONTAL SCALE IN FEET 0 5 10

VERTICAL SCALE IN FEET 0 5 10

CALCULATED GAU CHECKED NMM

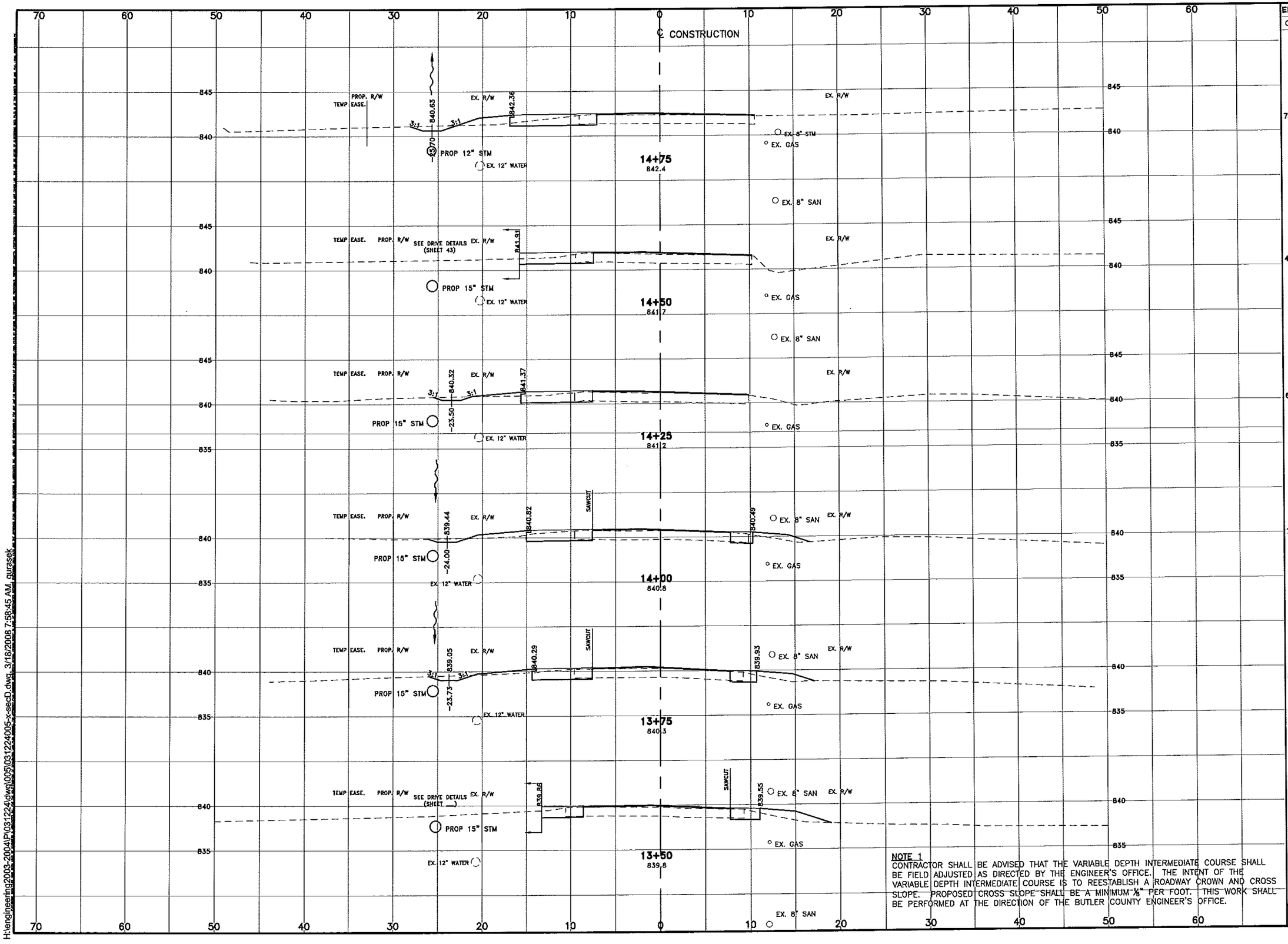
NOTE 1
CONTRACTOR SHALL BE ADVISED THAT THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER'S OFFICE. THE INTENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE IS TO REESTABLISH A ROADWAY CROWN AND CROSS SLOPE. PROPOSED CROSS SLOPE SHALL BE A MINIMUM ⅛" PER FOOT. THIS WORK SHALL BE PERFORMED AT THE DIRECTION OF THE BUTLER COUNTY ENGINEER'S OFFICE.

CROSS SECTIONS - BETHANY ROAD
STA.12+67.01 TO STA. 13+75

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		4	12
7.6	4.2		
		6	2
4.8	0.0		
		5	1
6.8	1.4		
		6	4
7.3	5.9		
		7	6
8.3	5.7		
		6	6
4.5	5.2		
SHEET TOTAL		34	31

HORIZONTAL SCALE IN FEET 0 5 10

VERTICAL SCALE IN FEET 0 5 10

CALCULATED GAU CHECKED NMM

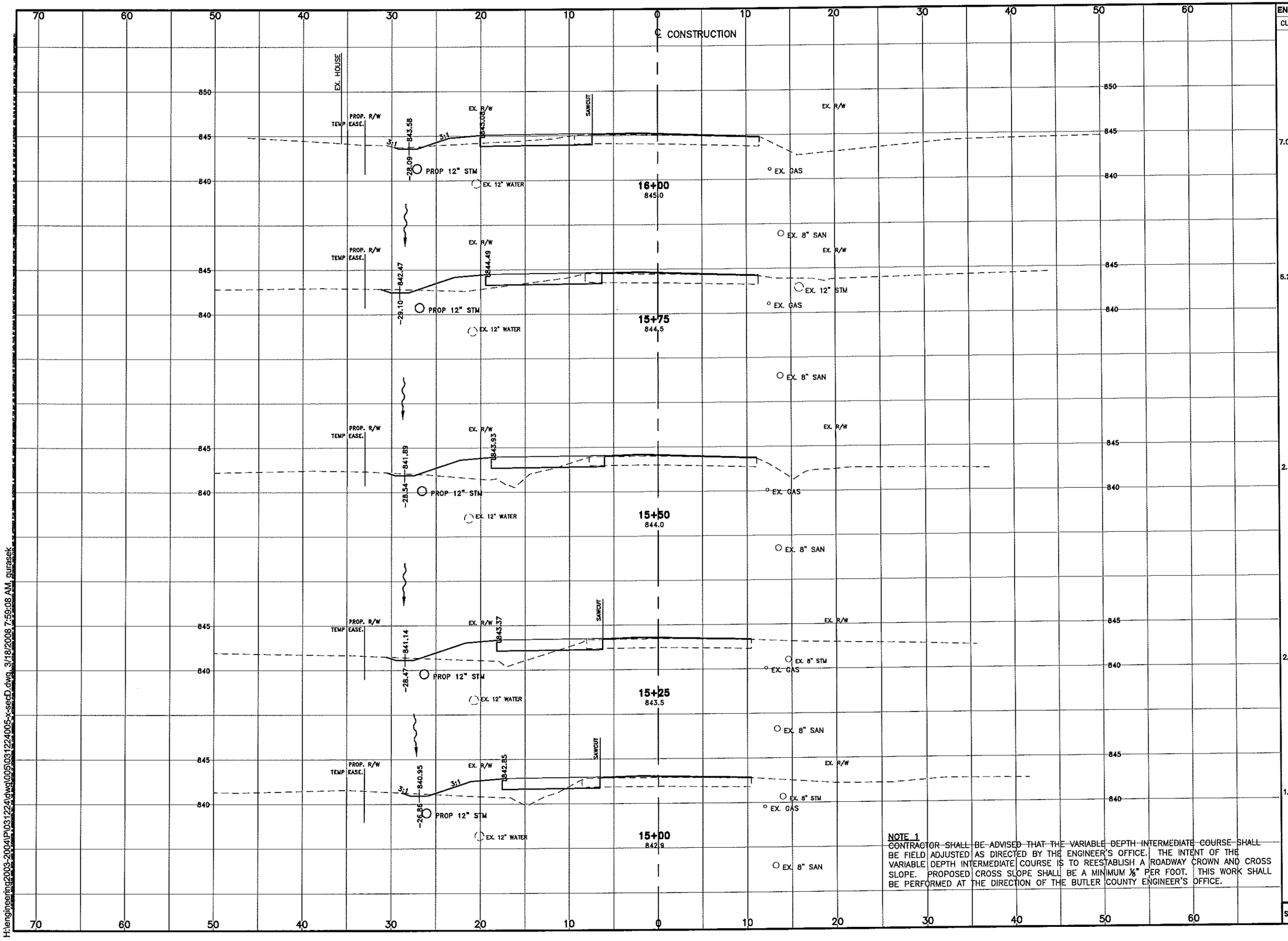
NOTE 1
CONTRACTOR SHALL BE ADVISED THAT THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER'S OFFICE. THE INTENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE IS TO REESTABLISH A ROADWAY CROWN AND CROSS SLOPE. PROPOSED CROSS SLOPE SHALL BE A MINIMUM ⅛" PER FOOT. THIS WORK SHALL BE PERFORMED AT THE DIRECTION OF THE BUTLER COUNTY ENGINEER'S OFFICE.

CROSS SECTIONS - BETHANY ROAD
STA.13+50 TO STA. 14+75

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ENGINEERS AND SURVEYORS
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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		7	4
7.0	4.0		
		6	7
5.2	9.8		
		4	16
2.7	20.7		
		2	21
2.6	19.2		
		2	20
1.7	17.8		
SHEET TOTAL		21	68

NOTE 1
CONTRACTOR SHALL BE ADVISED THAT THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER'S OFFICE. THE INTENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE IS TO REESTABLISH A ROADWAY CROWN AND CROSS SLOPE. PROPOSED CROSS SLOPE SHALL BE A MINIMUM ⅛" PER FOOT. THIS WORK SHALL BE PERFORMED AT THE DIRECTION OF THE BUTLER COUNTY ENGINEER'S OFFICE.

HORIZONTAL SCALE IN FEET 0 5 10
VERTICAL SCALE IN FEET 0 5 10

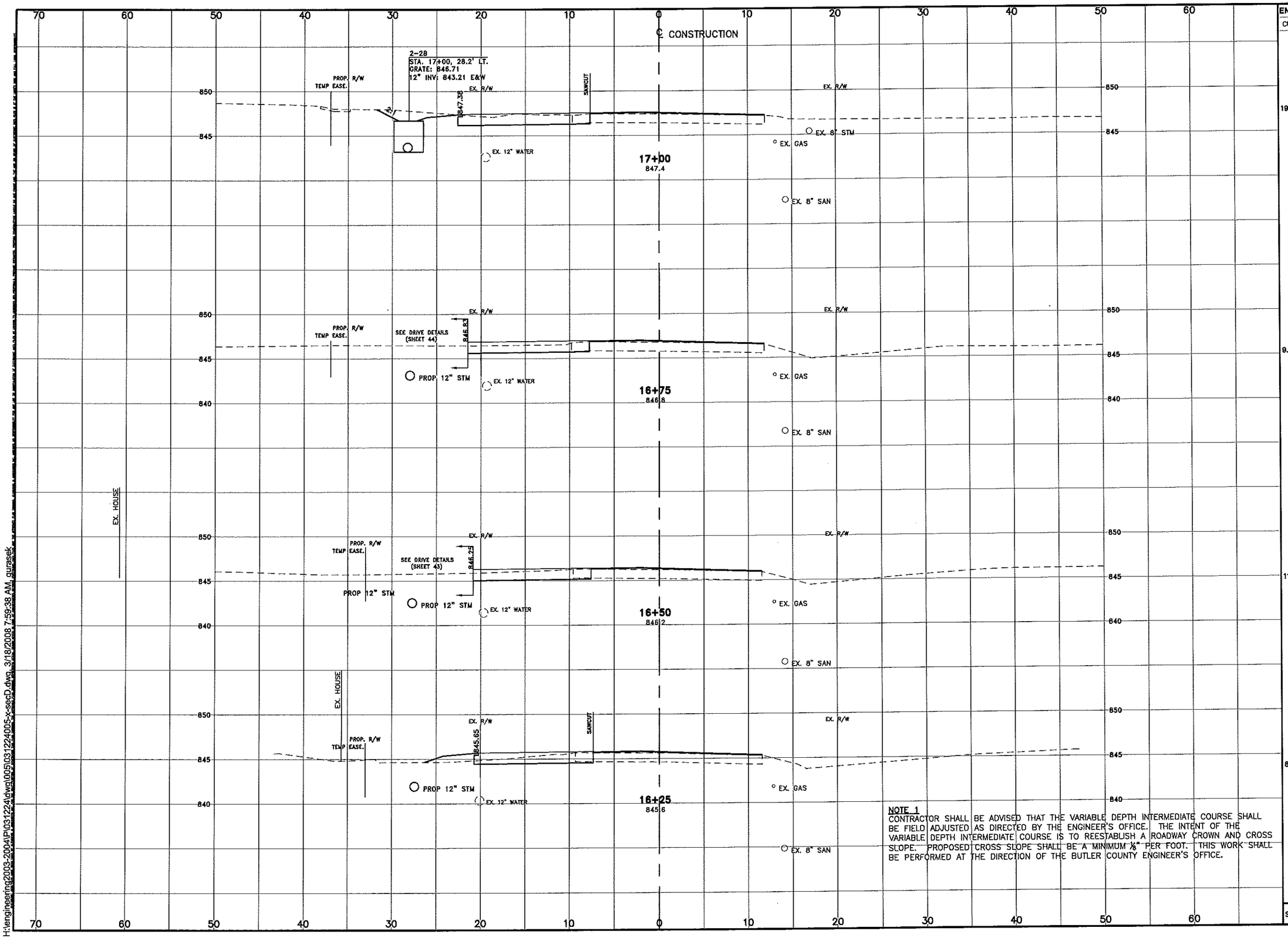
CALCULATED GAU
CHECKED NMM

CROSS SECTIONS - BETHANY ROAD
STA.15+00 TO STA. 16+00

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		18	0
19.4	0.0		
		14	0
9.8	0.0		
		10	0
11.0	0.0		
		9	2
8.5	3.5		
SHEET TOTAL		51	2

HORIZONTAL SCALE IN FEET 0 5 10

VERTICAL SCALE IN FEET 0 5 10

CALCULATED CAU CHECKED NMM

NOTE 1
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CROSS SECTIONS - BETHANY ROAD
STA.16+25 TO STA. 17+00

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NOTE 1
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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		30	0
34.4	0.0		
		28	0
21.2	0.0		
		20	0
21.3	0.0		
		19	0
19.5	0.0		
SHEET TOTAL		95	0

HORIZONTAL SCALE IN FEET
VERTICAL SCALE IN FEET

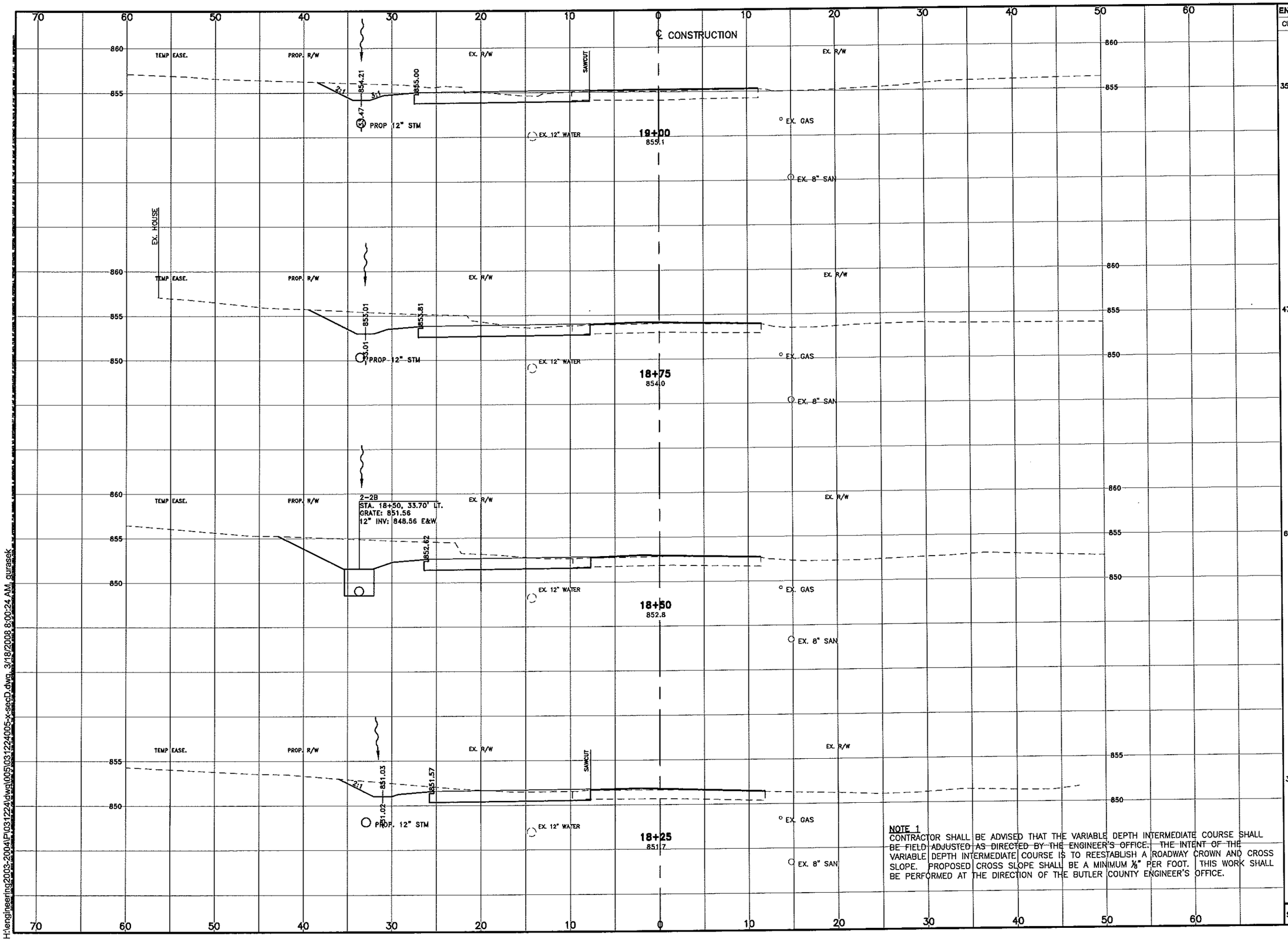
CALCULATED GAU
CHECKED NMM

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ENGINEERS AND SURVEYORS
West Chester, OH 45069
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CROSS SECTIONS - BETHANY ROAD
STA.17+25 TO STA. 18+00

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NOTE 1
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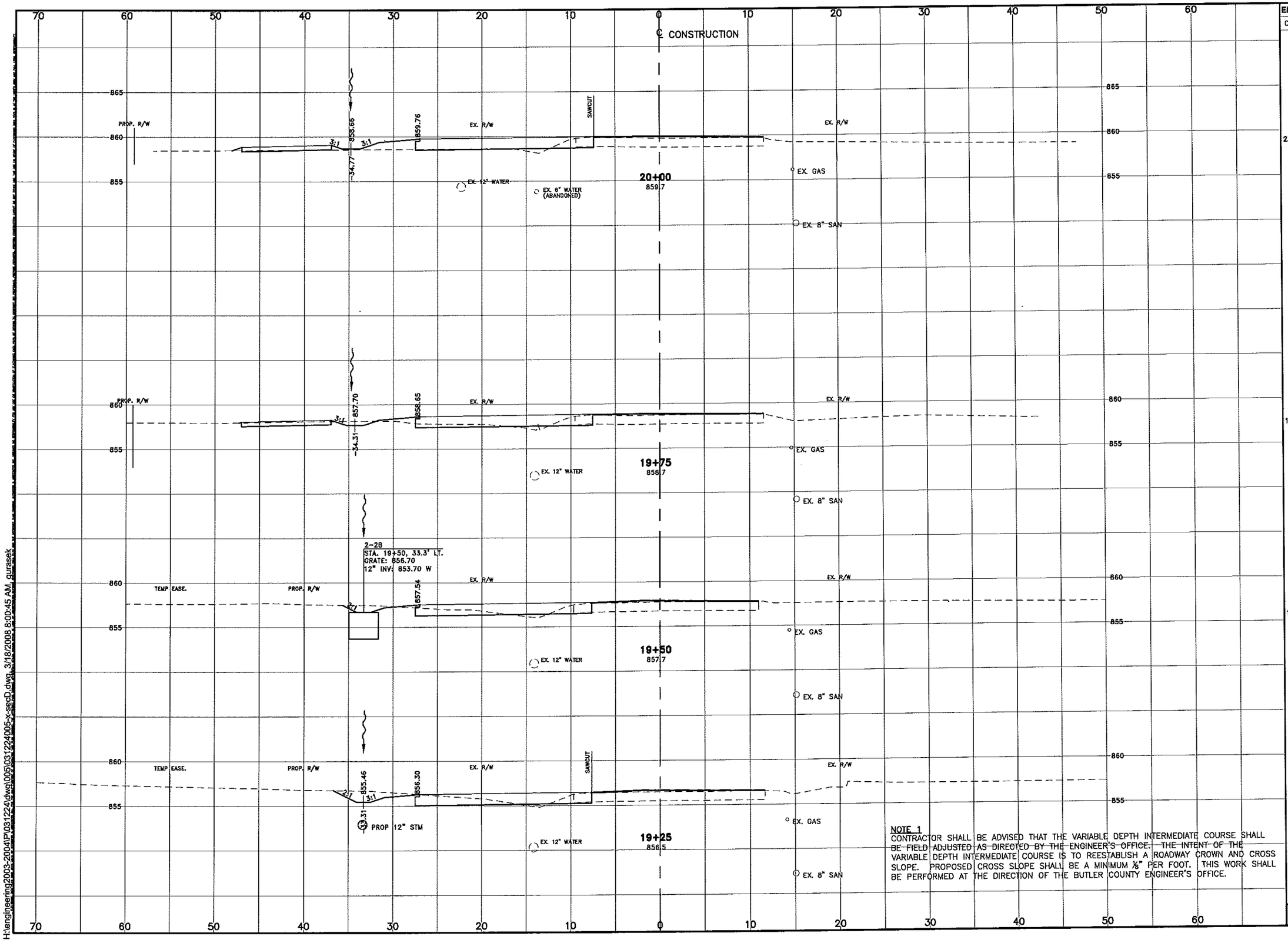
END AREA		VOLUME	
CUT	FILL	CUT	FILL
		24	0
35.1	0.0		
		38	0
47.4	0.0		
		53	0
87.7	0.0		
		45	0
30.2	0.0		
SHEET TOTAL		160	0

HORIZONTAL SCALE IN FEET
VERTICAL SCALE IN FEET
CALCULATED GAU
CHECKED NMM

CROSS SECTIONS - BETHANY ROAD
STA.18+25 TO STA. 19+00

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ENGINEERS AND SURVEYORS
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Mason, OH 45040
513-770-7801 Fax 513-770-7802

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		3	8
2.6	5.9		
		6	5
10.2	2.7		
		9	2
10.0	1.3		
		12	1
16.4	0.6		
SHEET TOTAL		30	16

HORIZONTAL SCALE IN FEET 0 5 10

VERTICAL SCALE IN FEET 0 5 10

CALCULATED GAU

CHECKED NMM

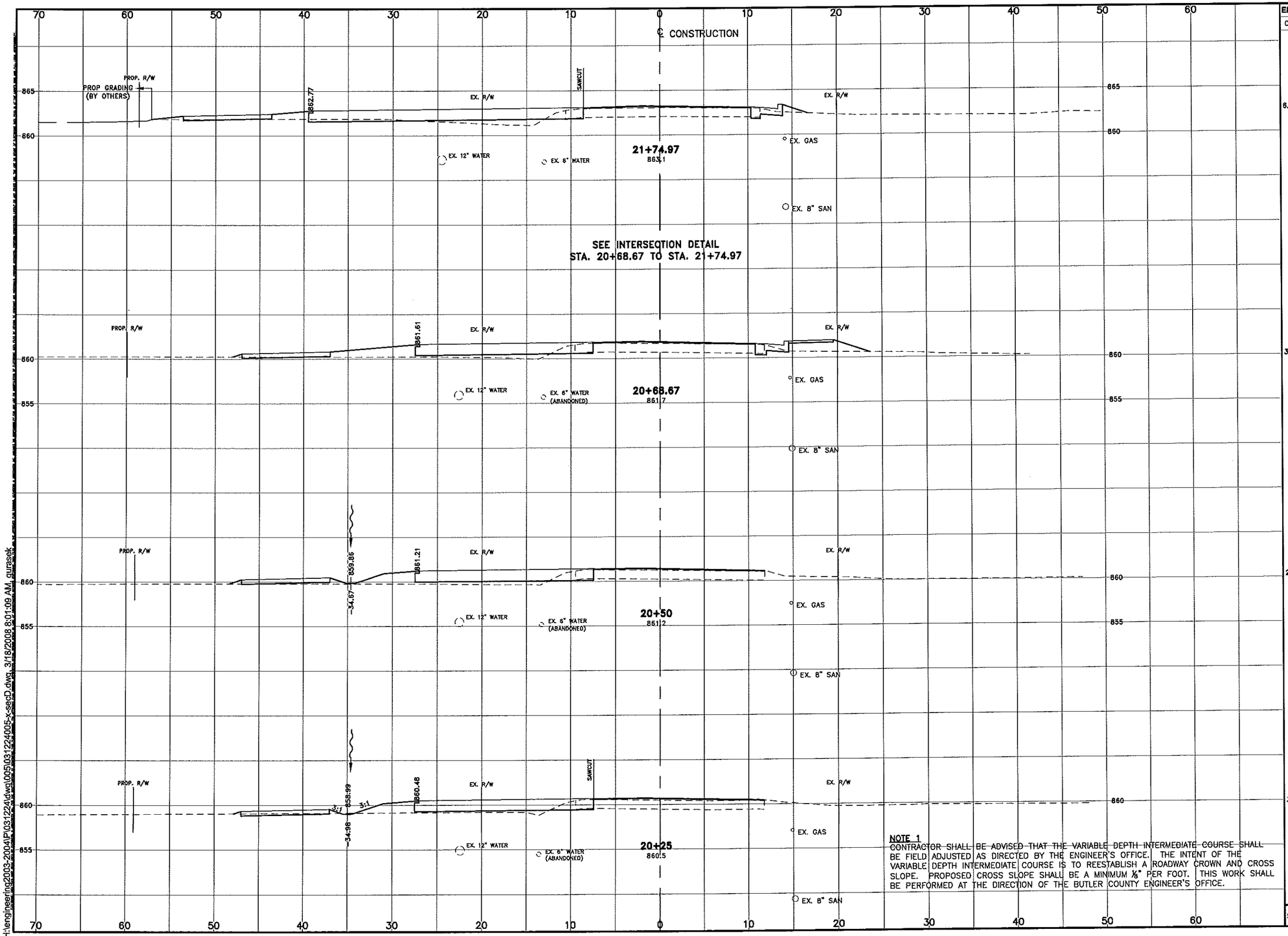
NOTE 1
CONTRACTOR SHALL BE ADVISED THAT THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER'S OFFICE. THE INTENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE IS TO REESTABLISH A ROADWAY CROWN AND CROSS SLOPE. PROPOSED CROSS SLOPE SHALL BE A MINIMUM ⅛" PER FOOT. THIS WORK SHALL BE PERFORMED AT THE DIRECTION OF THE BUTLER COUNTY ENGINEER'S OFFICE.

CROSS SECTIONS - BETHANY ROAD STA.19+25 TO STA. 20+00

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ENGINEERS AND SURVEYORS
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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		8	9
6.3	11.5		
3.4	26.9		
		2	16
2.3	13.3		
3.8	8.7		
		3	12
SHEET TOTAL		13	37

HORIZONTAL SCALE IN FEET 0 5 10

VERTICAL SCALE IN FEET 0 5 10

CALCULATED GAU

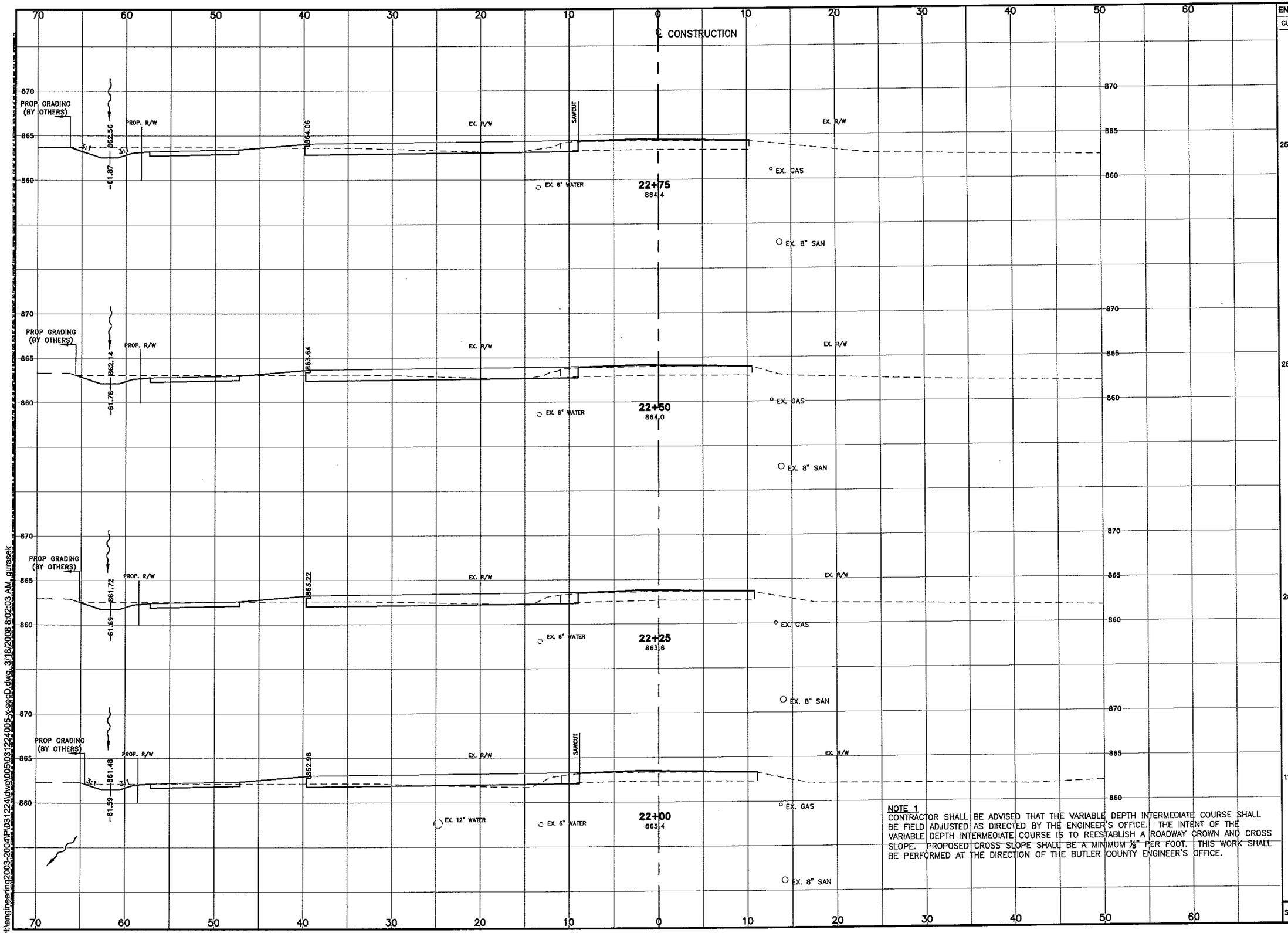
CHECKED NMM

NOTE 1
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CROSS SECTIONS - BETHANY ROAD STA.20+25 TO STA. 21+74.97

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NOTE 1
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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		25	1
25.8	1.4		
		24	1
26.4	1.3		
		25	1
28.2	0.7		
		19	3
11.9	5.4		
SHEET TOTAL		93	6

HORIZONTAL SCALE IN FEET 0 5 10
VERTICAL SCALE IN FEET 0 5 10

CALCULATED GAU
CHECKED NMM

CROSS SECTIONS - BETHANY ROAD
STA.22+00 TO STA. 22+75

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
8163 Corporate Park Drive
West Chester, OH 45069
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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		13	4
8.9	4.2		
		15	5
24.2	4.6		
		22	5
22.4	4.1		
		24	3
28.9	0.8		
SHEET TOTAL		74	13

HORIZONTAL SCALE IN FEET 0 5 10

VERTICAL SCALE IN FEET 0 5 10

CALCULATED GAU

CHECKED NMM

NOTE 1
CONTRACTOR SHALL BE ADVISED THAT THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER'S OFFICE. THE INTENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE IS TO REESTABLISH A ROADWAY CROWN AND CROSS SLOPE. PROPOSED CROSS SLOPE SHALL BE A MINIMUM ⅛" PER FOOT. THIS WORK SHALL BE PERFORMED AT THE DIRECTION OF THE BUTLER COUNTY ENGINEER'S OFFICE.

CROSS SECTIONS - BETHANY ROAD
STA.23+00 TO STA. 23+75

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8163 Corporate Park Drive
West Chester, OH 45069
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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		7	5
6.1	5.1		
		5	7
4.2	7.8		
		12	4
21.4	0.3		
		19	2
20.1	3.9		
SHEET TOTAL		43	18

HORIZONTAL SCALE IN FEET: 0, 5, 10

VERTICAL SCALE IN FEET: 0, 5, 10

CALCULATED GAU

CHECKED NMM

NOTE 1

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CROSS SECTIONS - BETHANY ROAD
STA.24+00 TO STA. 24+75

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8162 Corporate Way
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29
56

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		3	14
3.8	7.5		
		5	6
6.2	4.1		
		6	4
7.1	3.9		
		7	4
8.1	3.9		
SHEET TOTAL		21	28

HORIZONTAL SCALE IN FEET: 0 5 10

VERTICAL SCALE IN FEET: 0 5 10

CALCULATED CAU

CHECKED NMM

CROSS SECTIONS - BETHANY ROAD
STA.25+00 TO STA. 25+75

25+75
866.0
PROP. R/W
EX. R/W
5:1
865.87
SAWCUT
EX. 6" WATER
EX. 12" STM
EX. 8" SAN

25+50
865.9
PROP. R/W
EX. R/W
864.31
-32.63
865.80
EX. 6" WATER
EX. 12" STM
EX. 8" SAN

25+25
866.0
PROP. R/W
EX. R/W
864.44
-33.08
865.87
EX. 6" WATER
EX. 12" STM
EX. GAS
EX. 8" SAN

25+00
866.0
PROP. R/W
EX. R/W
5:1
864.57
-33.51
3:1
865.94
SAWCUT
EX. 6" WATER
EX. 12" STM
EX. GAS
EX. 8" SAN

NOTE 1
CONTRACTOR SHALL BE ADVISED THAT THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER'S OFFICE. THE INTENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE IS TO REESTABLISH A ROADWAY CROWN AND CROSS SLOPE. PROPOSED CROSS SLOPE SHALL BE A MINIMUM ⅛" PER FOOT. THIS WORK SHALL BE PERFORMED AT THE DIRECTION OF THE BUTLER COUNTY ENGINEER'S OFFICE.

KLEINGERS & ASSOCIATES ENGINEERS AND SURVEYORS
West Chester, OH 45069
513-779-7851 Fax: 513-779-7852

30
56

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		2	60
2.6	54.5		
		3	53
2.9	44.1		
		3	40
2.8	30.6		
		3	27
3.0	19.7		
SHEET TOTAL		11	180

HORIZONTAL SCALE IN FEET (0, 5, 10)

VERTICAL SCALE IN FEET (0, 5, 10)

CALCULATED CAU

CHECKED NMM

NOTE 1
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CROSS SECTIONS - BETHANY ROAD
STA.26+00 TO STA. 26+75

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ENGINEERS AND SURVEYORS
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513-779-7851 Fax: 513-779-7852

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		2	113
1.8	102.8		
		2	99
1.8	83.0		
		2	81
2.1	68.6		
		2	68
2.4	58.7		
SHEET TOTAL		8	361

HORIZONTAL SCALE IN FEET (0, 5, 10)

VERTICAL SCALE IN FEET (0, 5, 10)

CALCULATED GAU

CHECKED NMM

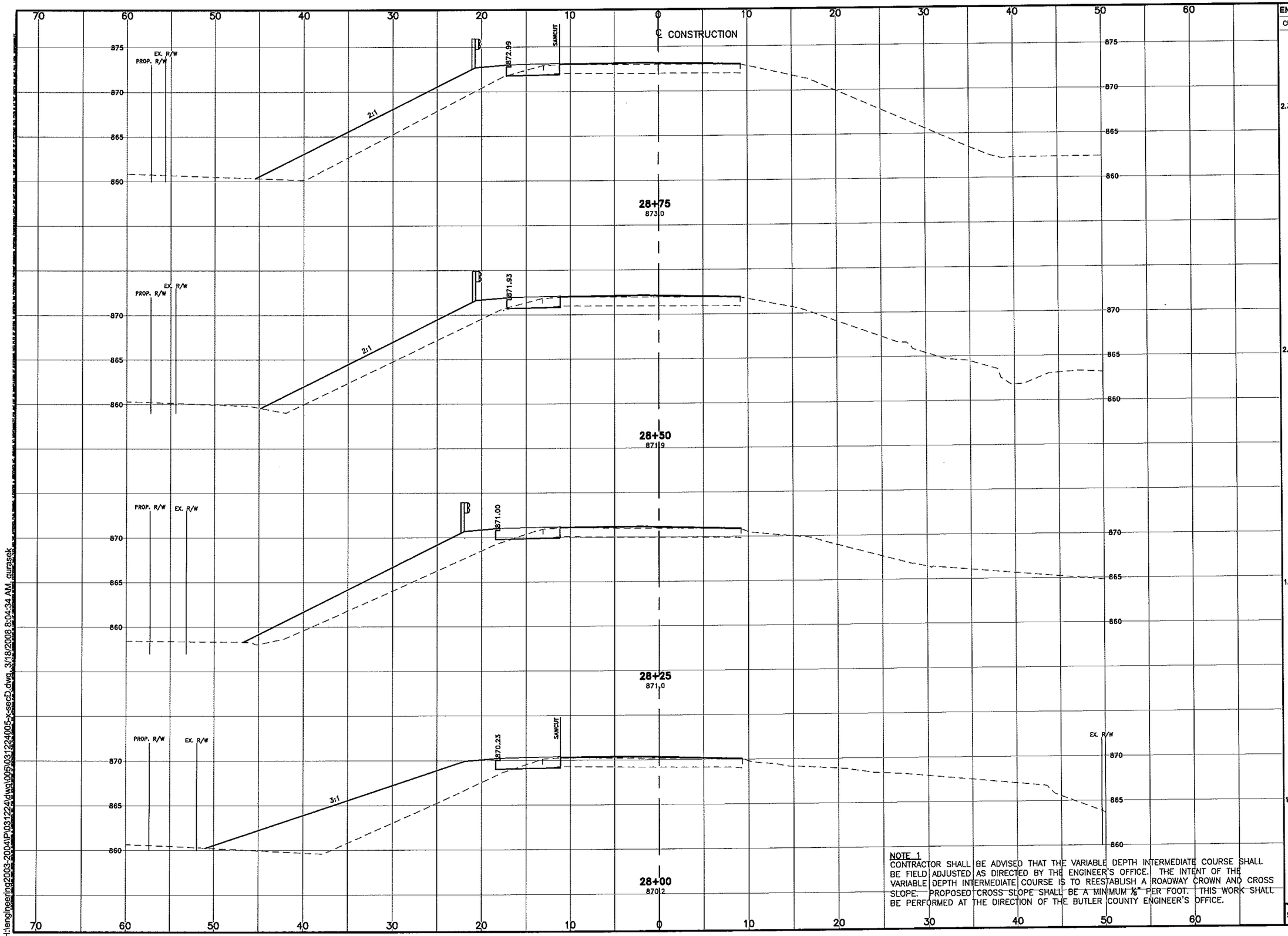
NOTE 1
CONTRACTOR SHALL BE ADVISED THAT THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER'S OFFICE. THE INTENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE IS TO REESTABLISH A ROADWAY CROWN AND CROSS SLOPE. PROPOSED CROSS SLOPE SHALL BE A MINIMUM ⅛" PER FOOT. THIS WORK SHALL BE PERFORMED AT THE DIRECTION OF THE BUTLER COUNTY ENGINEER'S OFFICE.

CROSS SECTIONS - BETHANY ROAD
STA.27+00 TO STA. 27+75

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
5162 Dragon Way
West Chester, OH 45069
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NOTE 1
CONTRACTOR SHALL BE ADVISED THAT THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER'S OFFICE. THE INTENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE IS TO REESTABLISH A ROADWAY CROWN AND CROSS SLOPE. PROPOSED CROSS SLOPE SHALL BE A MINIMUM ⅛" PER FOOT. THIS WORK SHALL BE PERFORMED AT THE DIRECTION OF THE BUTLER COUNTY ENGINEER'S OFFICE.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		2	69
2.3	69.3		
		2	68
2.2	55.2		
		2	65
1.9	66.5		
		2	94
1.6	109.6		
SHEET TOTAL		8	294

HORIZONTAL SCALE IN FEET 0 5 10

VERTICAL SCALE IN FEET 0 5 10

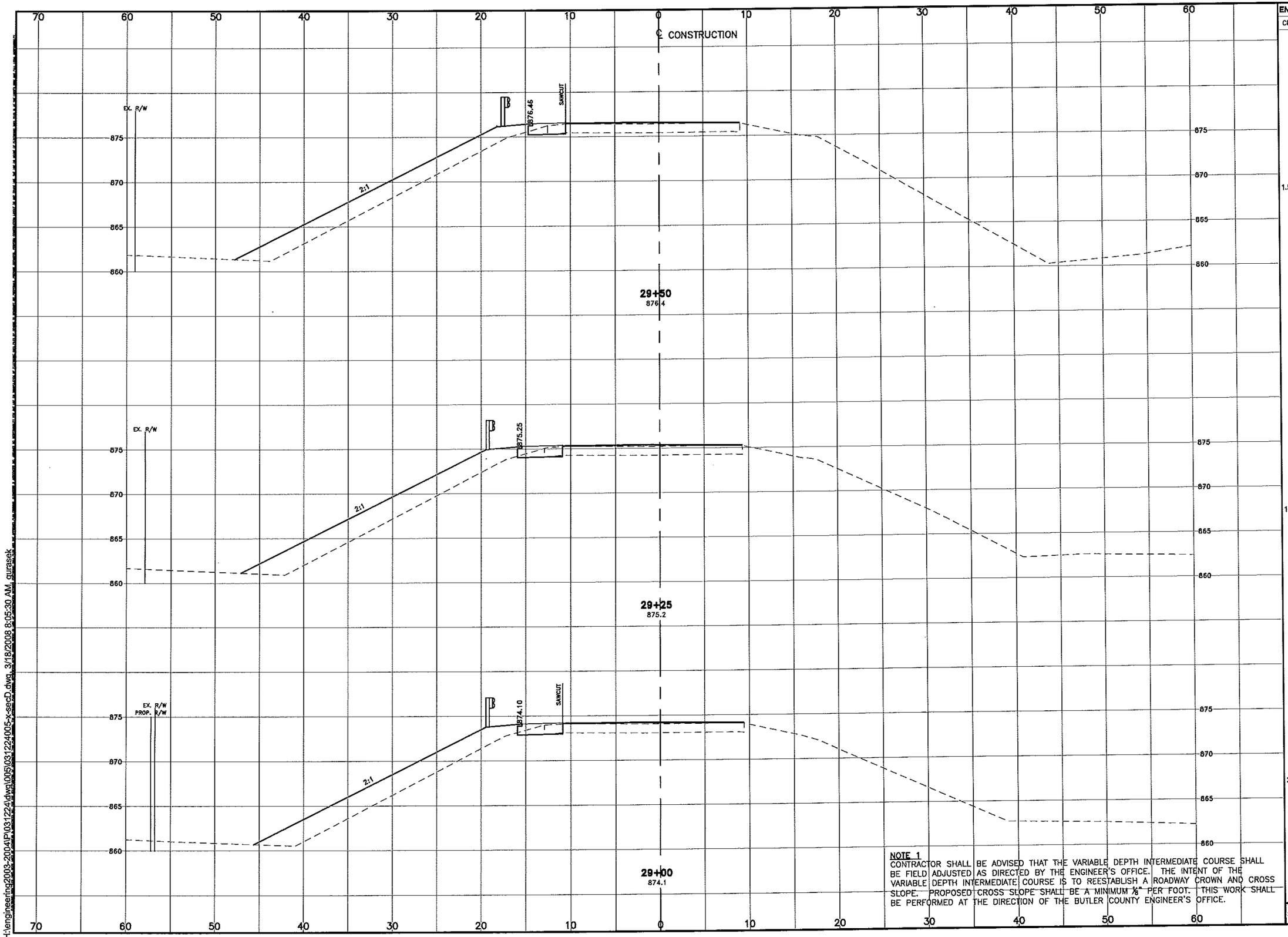
CALCULATED GAU
CHECKED NMM

CROSS SECTIONS - BETHANY ROAD
STA.28+00 TO STA. 28+75

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ENGINEERS, PLANNERS, SURVEYORS
West Chester, OH 45069
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33
56

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NOTE 1
CONTRACTOR SHALL BE ADVISED THAT THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER'S OFFICE. THE INTENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE IS TO REESTABLISH A ROADWAY CROWN AND CROSS SLOPE. PROPOSED CROSS SLOPE SHALL BE A MINIMUM ⅛" PER FOOT. THIS WORK SHALL BE PERFORMED AT THE DIRECTION OF THE BUTLER COUNTY ENGINEER'S OFFICE.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1	66
1.5	60.3		
		1	69
1.7	69.0		
		2	69
2.0	60.9		
SHEET TOTAL		4	204

HORIZONTAL SCALE IN FEET 0 5 10

VERTICAL SCALE IN FEET 0 5 10

CALCULATED GAU
CHECKED NMM

CROSS SECTIONS - BETHANY ROAD STA.29+00 TO 29+50

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ENGINEERS AND SURVEYORS
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West Chester, OH 45069
513-779-7851 Fax: 513-779-7852

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56

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1	62
1.2	66.1		
		1	65
1.3	55.7		
		1	64
1.4	64.4		
SHEET TOTAL		3	191

HORIZONTAL SCALE IN FEET 0 5 10

VERTICAL SCALE IN FEET 0 5 10

CALCULATED GAU

CHECKED NMM

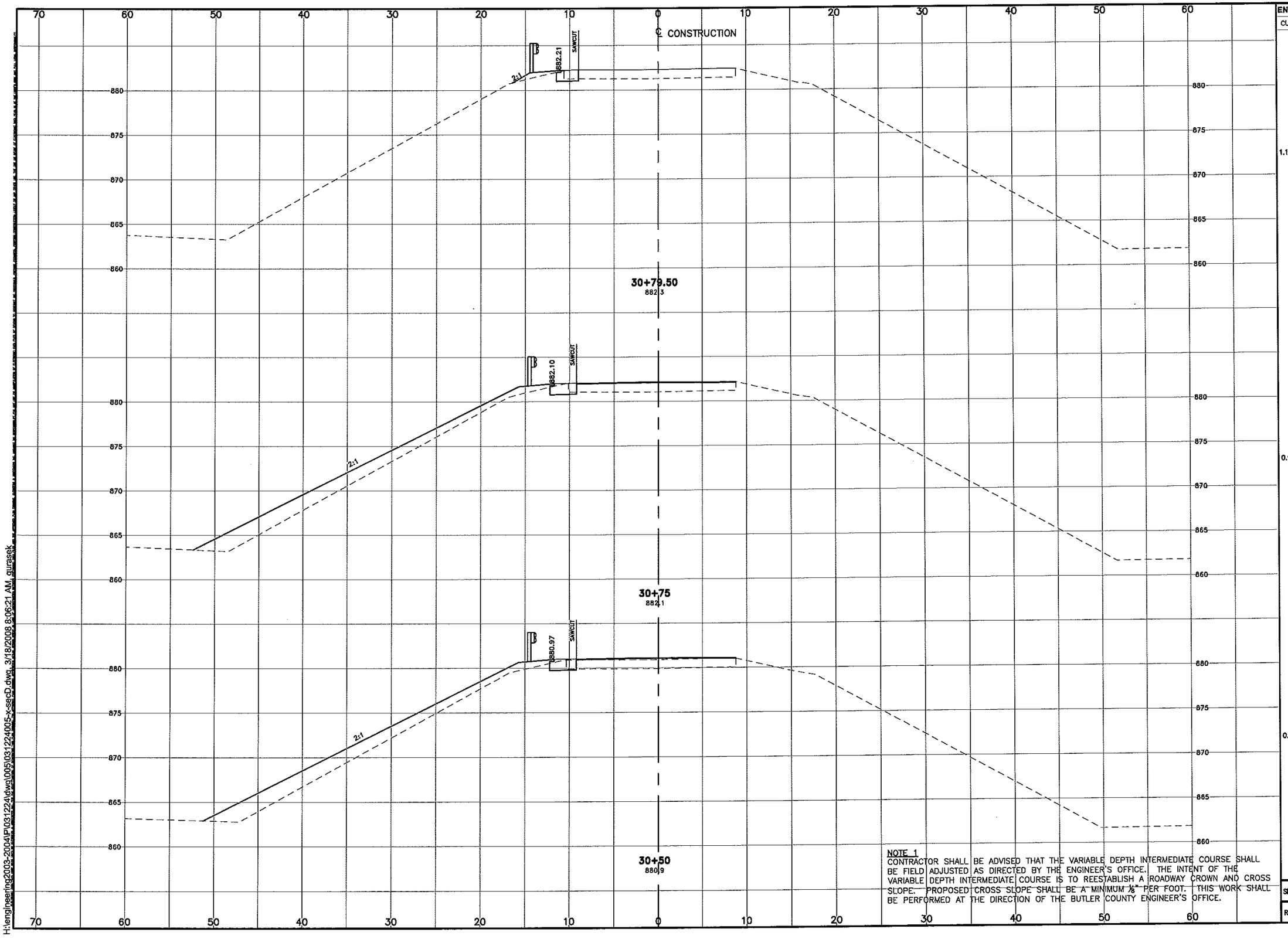
CROSS SECTIONS - BETHANY ROAD STA.29+75 TO STA. 30+25

KLEINGERS & ASSOCIATES ENGINEERS AND SURVEYORS 8163 Corporate Park Drive Mason, OH 45040 513-779-7851 Fax: 513-779-7852

35
56

NOTE 1
CONTRACTOR SHALL BE ADVISED THAT THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER'S OFFICE. THE INTENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE IS TO REESTABLISH A ROADWAY CROWN AND CROSS SLOPE. PROPOSED CROSS SLOPE SHALL BE A MINIMUM ⅛" PER FOOT. THIS WORK SHALL BE PERFORMED AT THE DIRECTION OF THE BUTLER COUNTY ENGINEER'S OFFICE.

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.1	2.0		
		0	5
0.9	51.4		
		1	55
0.9	51.1		
SHEET TOTAL		1	60
ROAD TOTAL		678	1548

HORIZONTAL SCALE IN FEET: 0 5 10

VERTICAL SCALE IN FEET: 0 5 10

CALCULATED GAU

CHECKED NMM

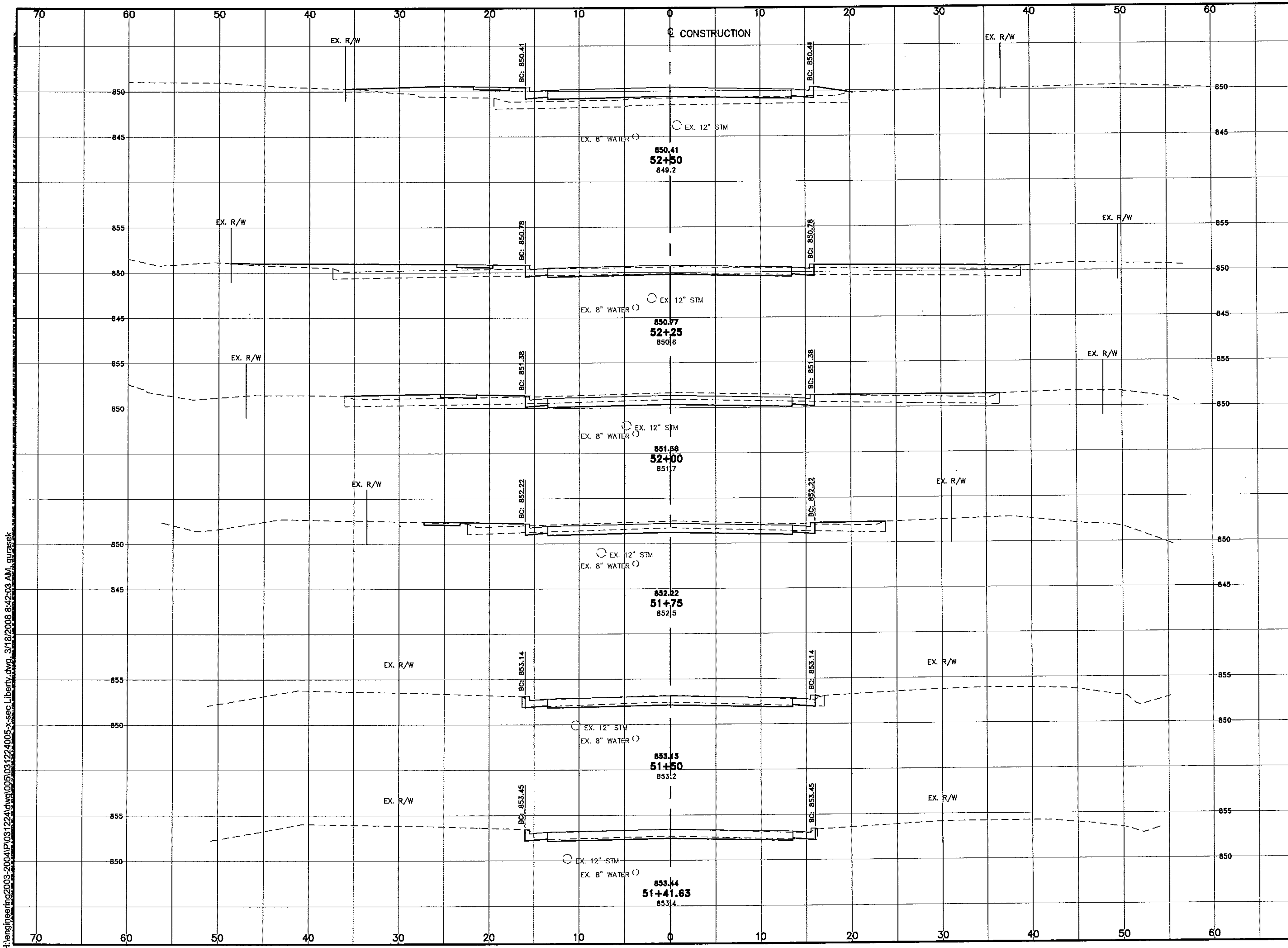
CROSS SECTIONS - BETHANY ROAD STA.30+50 TO STA. 30+79.50

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West Chester, OH 45069
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36
56

NOTE 1
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END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.8	59.2		
		0	62
0	57.5		
		8	52
16.2	39.9		
		14	29
13.6	15.1		
		6	8
0	0		
		0	0
0	0		
SHEET TOTAL		28	151

HORIZONTAL SCALE IN FEET: 0 5 10

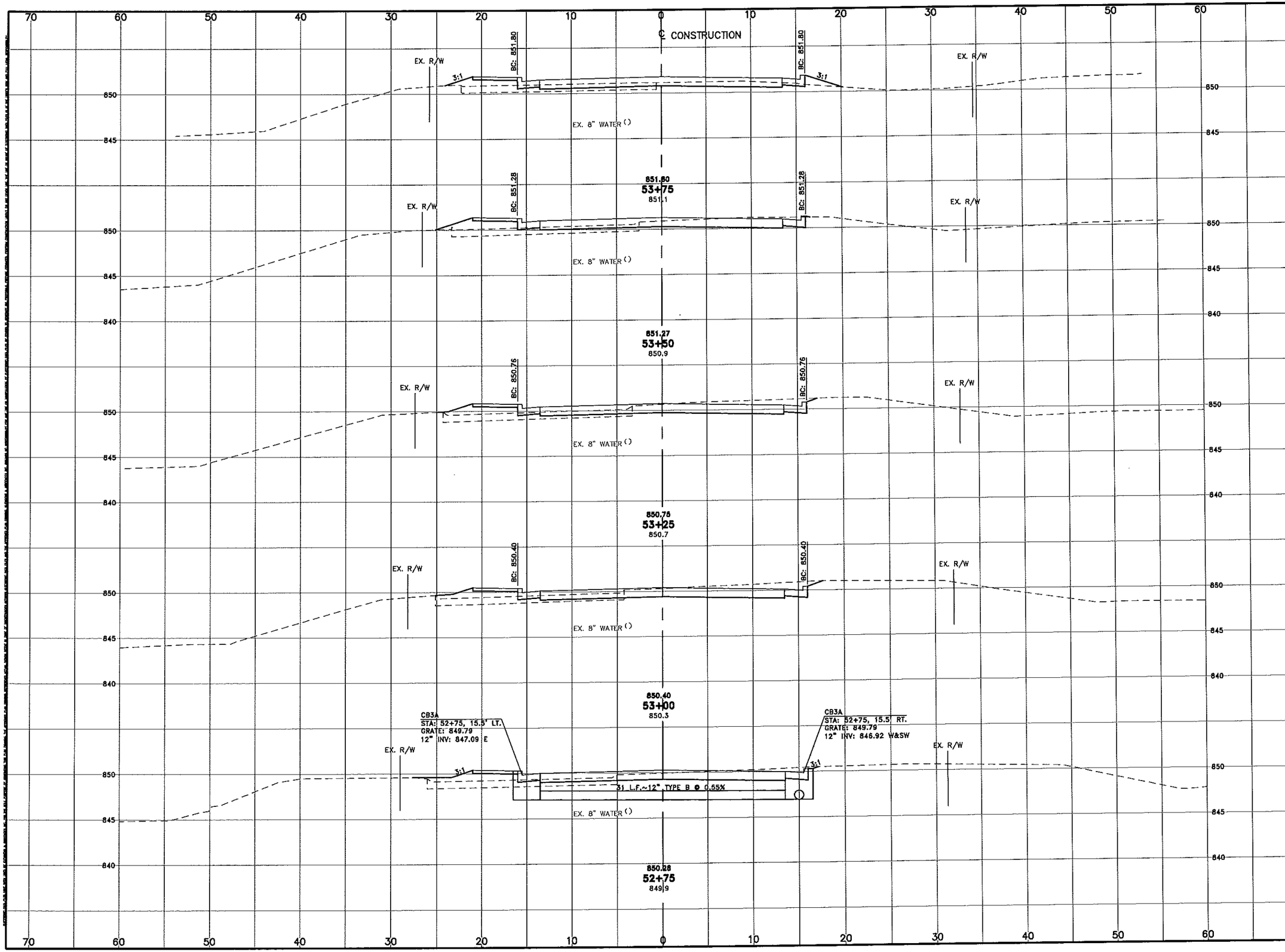
VERTICAL SCALE IN FEET: 0 5 10

CALCULATED: GAU
CHECKED: NMM

CROSS SECTIONS - LIBERTY COURT
STA. 51+41.63 TO STA. 52+50

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END AREA		VOLUME	
CUT	FILL	CUT	FILL
7.6	14.7		
		11	18
17.1	18.7		
		19	19
24.4	16.7		
		23	17
25.9	15.8		
		21	10
20.1	19.3		
		10	42
SHEET TOTAL		84	106

HORIZONTAL SCALE IN FEET
0 5 10

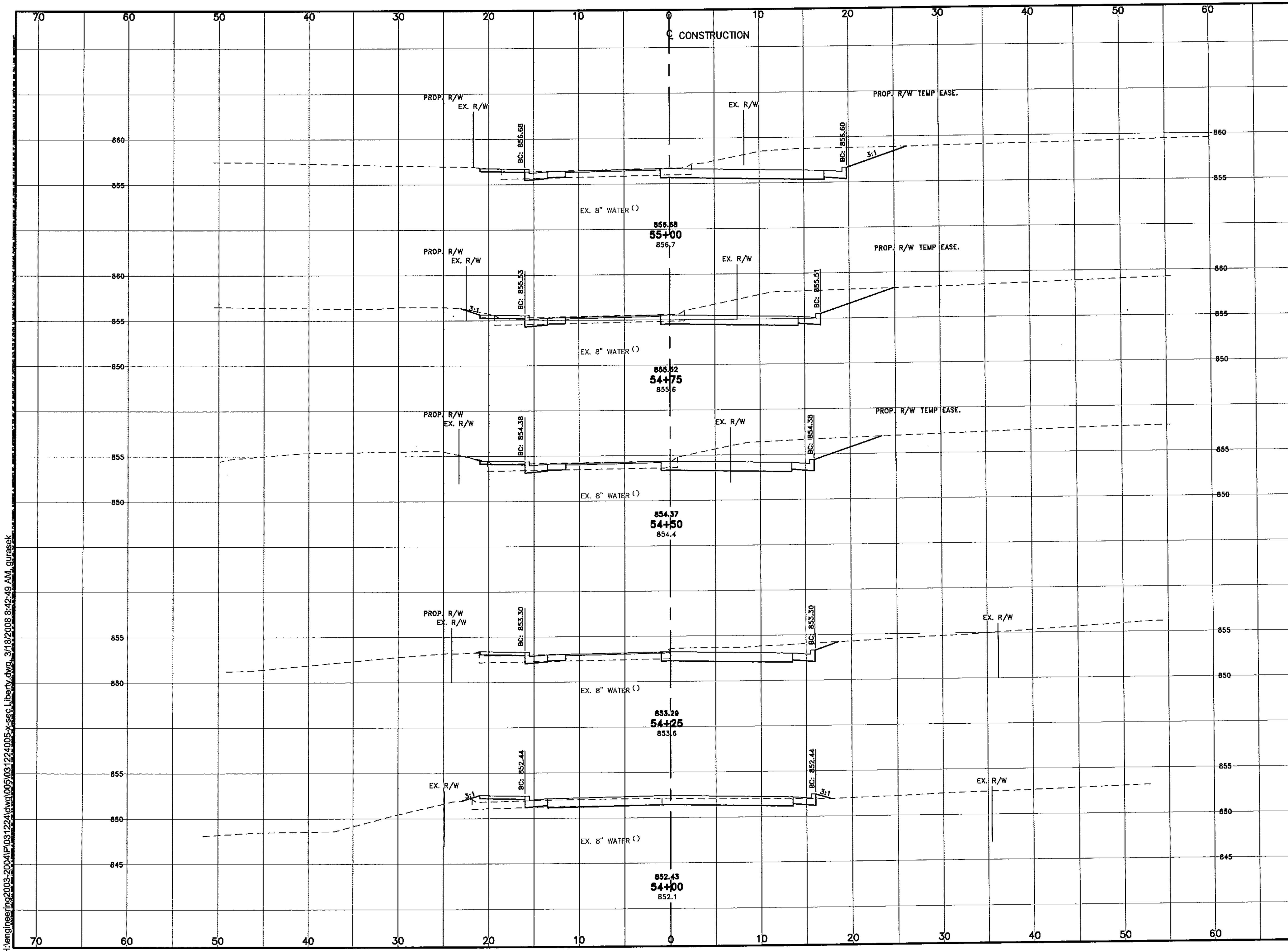
VERTICAL SCALE IN FEET
0 5 10

CALCULATED GAU
CHECKED NMM

CROSS SECTIONS - LIBERTY COURT
STA. 52+75 TO STA. 53+75

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
5960 Heisley Road
Mentor, OH 44060
513-779-7851 Fax: 513-779-7853

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56



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		47	2
56.1	2.0		
		52	2
55.6	2.6		
		49	3
50.9	3.3		
		38	4
27.4	4.0		
		18	6
12.4	6.7		
		9	11
SHEET TOTAL		211	28

HORIZONTAL SCALE IN FEET 0 5 10

VERTICAL SCALE IN FEET 0 5 10

CALCULATED GAU

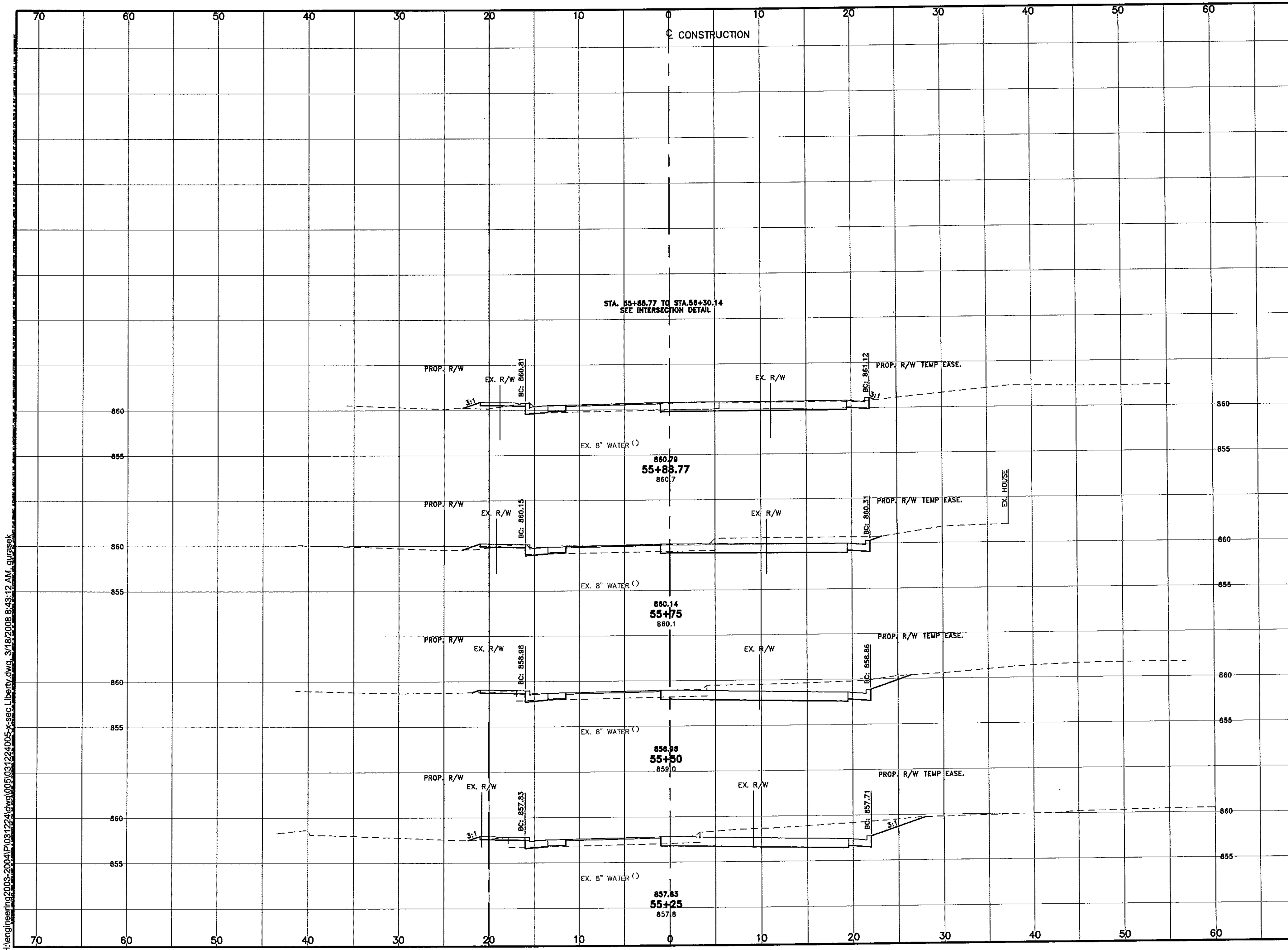
CHECKED NMM

CROSS SECTIONS - LIBERTY COURT
STA. 54+00 TO STA. 55+00

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ENGINEERS AND SURVEYORS

39 / 56

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END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
15.0	1.3		
		11	1
28.3	0.8		
		30	1
38.5	0.6		
		38	1
46.2	1.4		
SHEET TOTAL		79	3
ROAD TOTAL		405	297

HORIZONTAL SCALE IN FEET 0 5 10

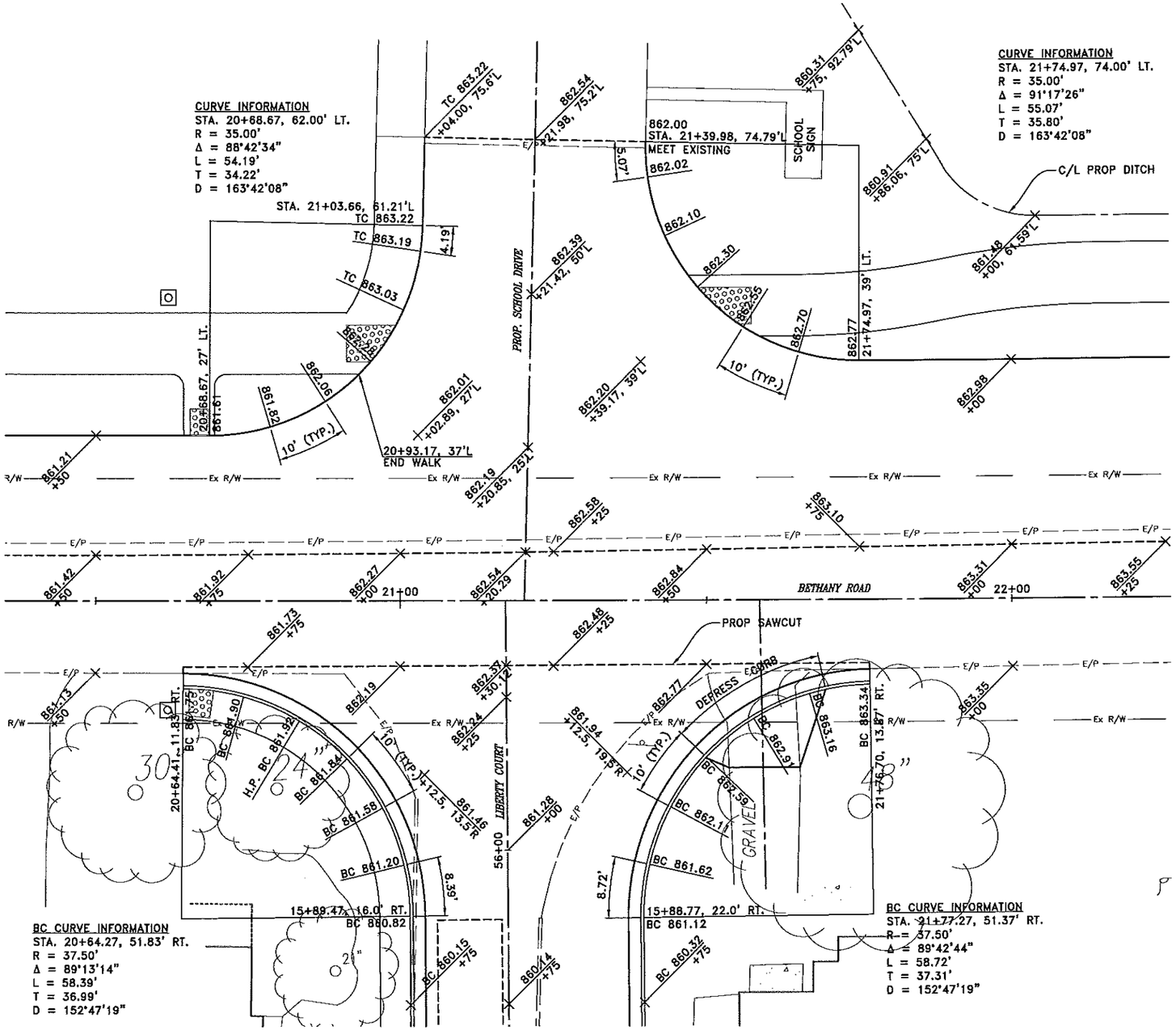
VERTICAL SCALE IN FEET 0 5 10

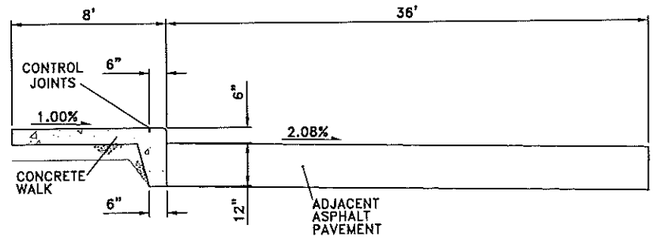
CALCULATED GAU
CHECKED NMM

CROSS SECTIONS - LIBERTY COURT
STA. 55+25 TO STA. 55+88.77

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS

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56





SCHOOL DRIVE DETAIL
N.T.S.

NOTE:
"BC" REFERS TO TOP/BACK OF CURB ELEVATION AND/OR LOCATION.

"TC" REFERS TO TOP OF CURB ELEVATION AND/OR LOCATION.

BACK OF CURB ELEVATIONS DO NOT ACCOUNT FOR CURB DEPRESSIONS AT RAMPS. ADJUST AS NECESSARY.

HORIZONTAL SCALE IN FEET
0 5 10 20

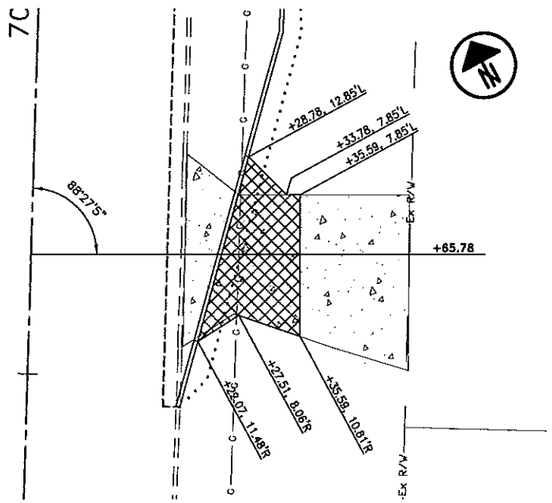
CALCULATED GAU
CHECKED TSC

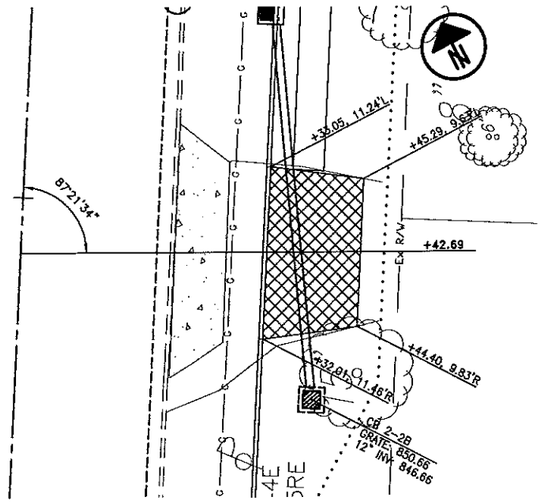
BETHANY ROAD ROADWAY IMPROVEMENTS
INTERSECTION DETAIL

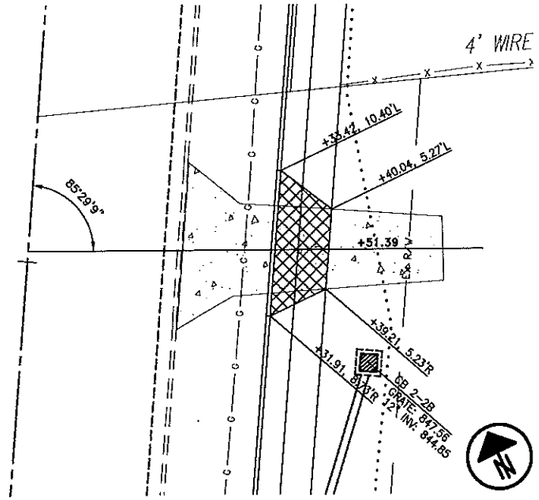
KLEINGERS & ASSOCIATES
ENGINEERS & CONSULTANTS
4555 Lake Forest Drive, Suite 340
Blue Ash, Ohio 45242
513-779-7851 Fax: 513-779-7852

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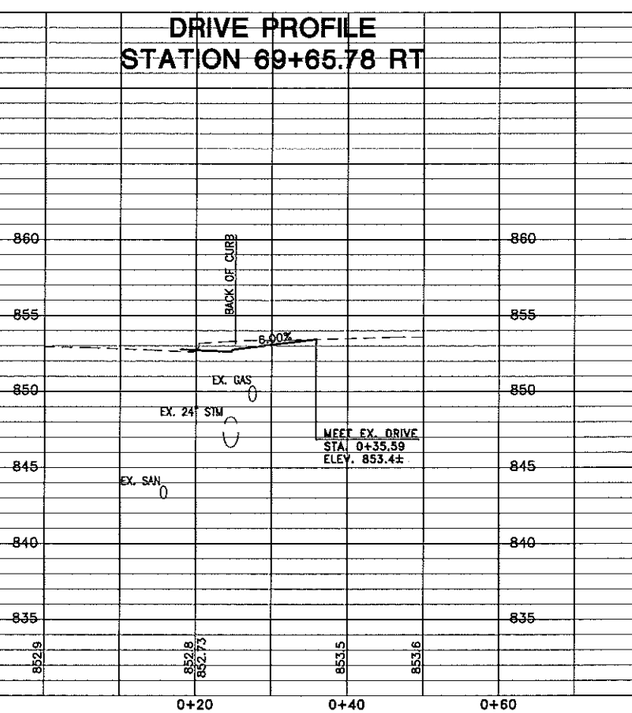


PAVEMENT COMPOSITION FOR DRIVEWAYS

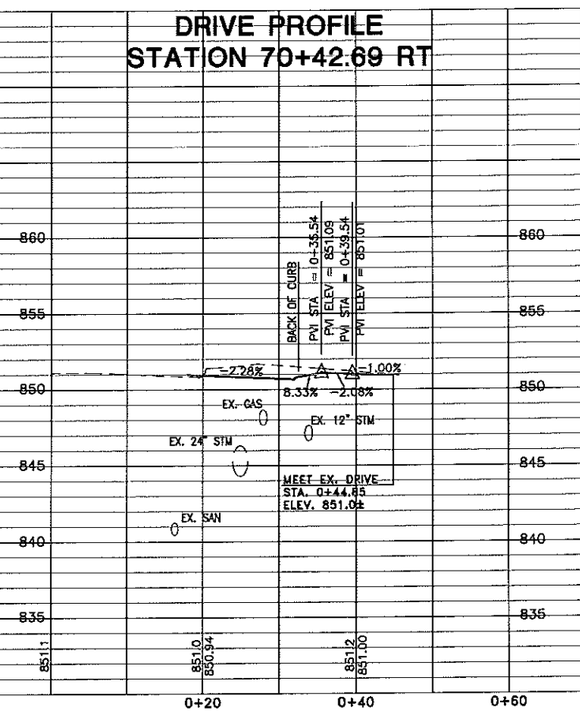
RESIDENTIAL ASPHALT DRIVEWAY APPROACH
448 – 1-1/4" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, PG64-22
301 – 4" ASPHALT CONCRETE BASE, PG64-22
204 – SUBGRADE COMPACTION

RESIDENTIAL CONCRETE DRIVEWAY APPROACH
452 – 6" NON-REINFORCED CONCRETE PAVEMENT
204 – SUBGRADE COMPACTION

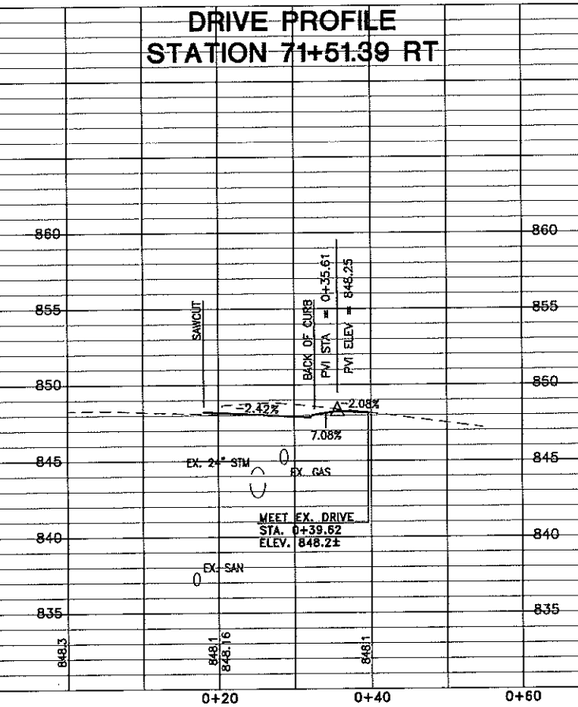
DRIVE PROFILE
STATION 69+65.78 RT



DRIVE PROFILE
STATION 70+42.69 RT



DRIVE PROFILE
STATION 71+51.39 RT



HORIZONTAL SCALE IN FEET
0 5 10 20

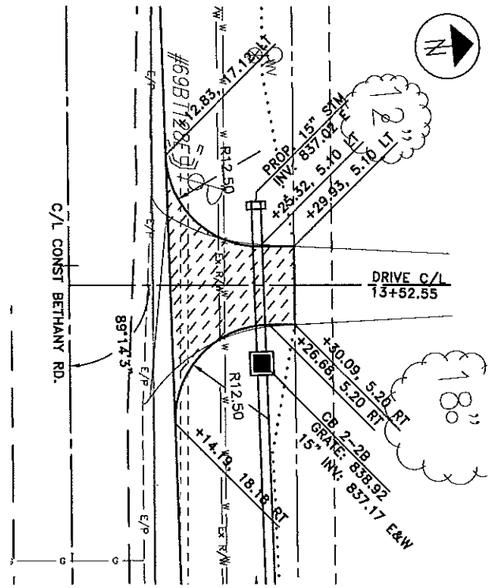
VERTICAL SCALE IN FEET
0 5 10

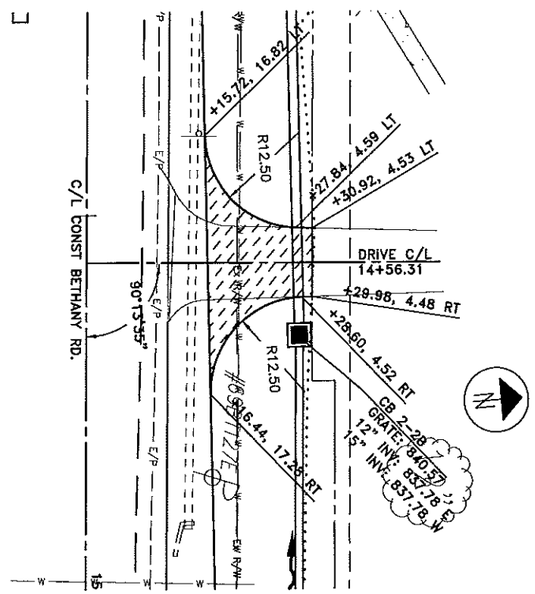
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CHECKED NMM

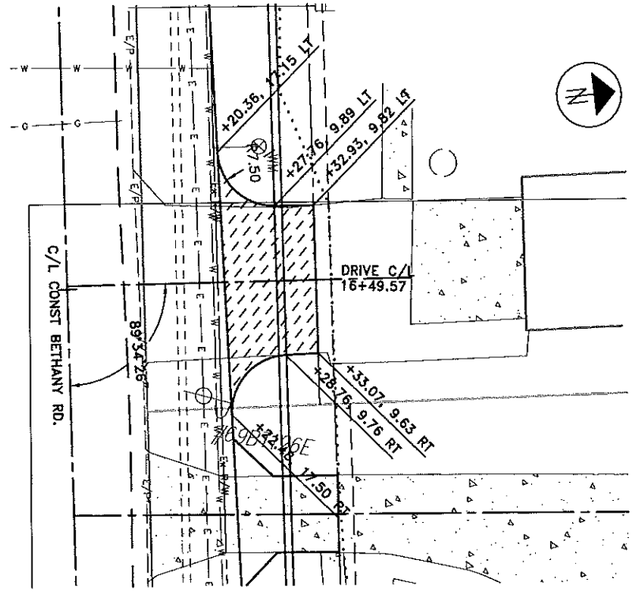
CINCINNATI-DAYTON ROAD ROADWAY IMPROVEMENTS
DRIVEWAY DETAILS

KLEINGERS & ASSOCIATES
Engineers and Surveyors
Mail Address
Dayton, OH 45458
513-779-7851 Fax: 513-779-7852

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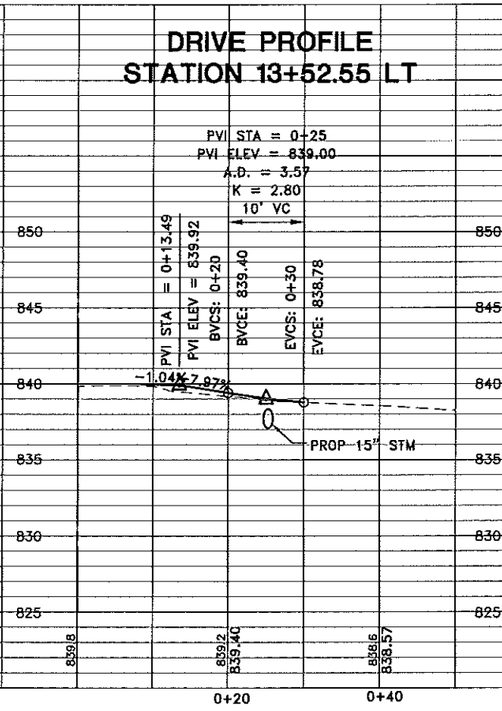


PAVEMENT COMPOSITION FOR DRIVEWAYS

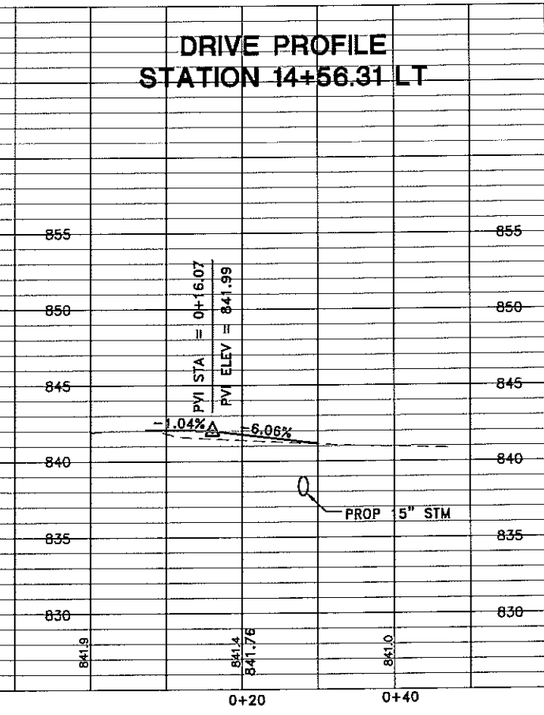
RESIDENTIAL ASPHALT DRIVEWAY APPROACH
448 – 1-1/4" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, PG64-22
301 – 4" ASPHALT CONCRETE BASE, PG64-22
204 – SUBGRADE COMPACTION

RESIDENTIAL CONCRETE DRIVEWAY APPROACH
452 – 6" NON-REINFORCED CONCRETE PAVEMENT
204 – SUBGRADE COMPACTION

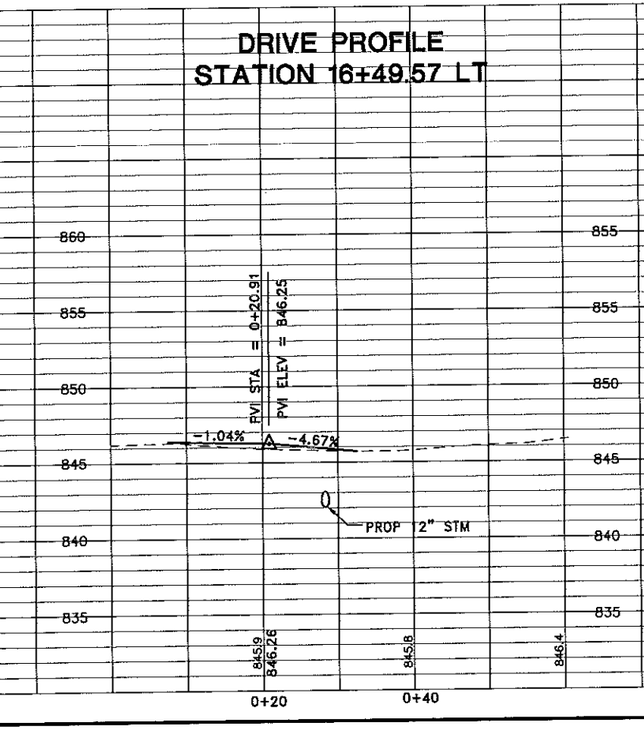
DRIVE PROFILE
STATION 13+52.55 LT



DRIVE PROFILE
STATION 14+56.31 LT



DRIVE PROFILE
STATION 16+49.57 LT



BETHANY ROAD ROADWAY IMPROVEMENTS
DRIVEWAY DETAILS

HORIZONTAL SCALE IN FEET
0 5 10 20

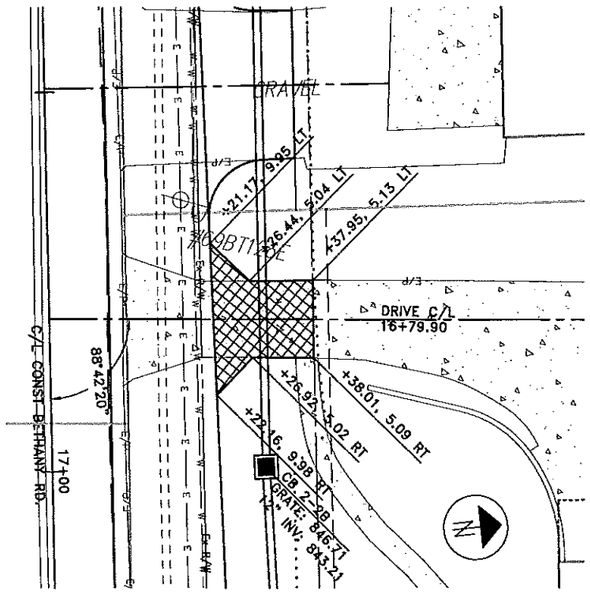
VERTICAL SCALE IN FEET
0 5 10

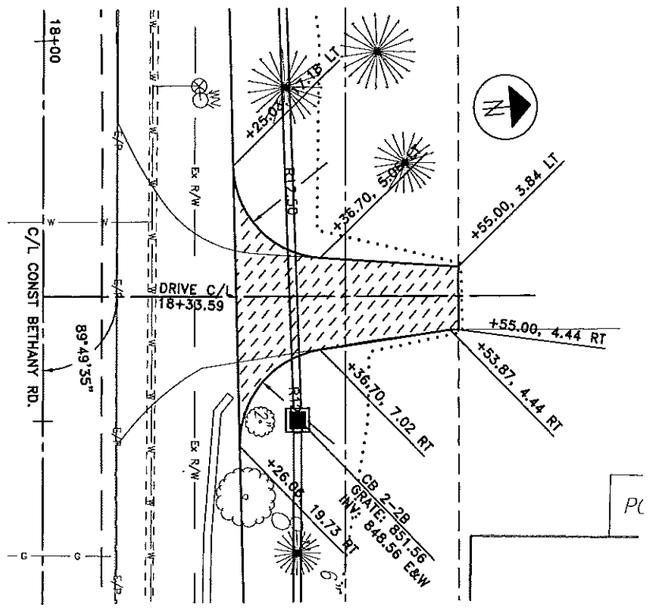
CALCULATED CAU
CHECKED NMM

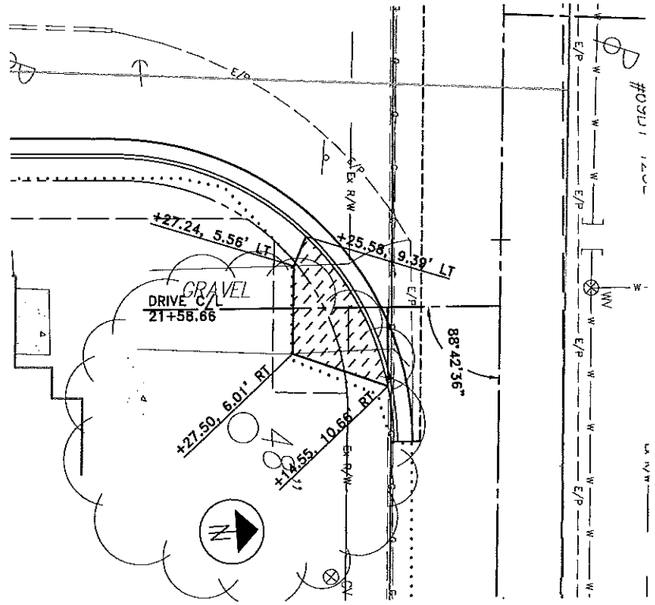
KLEINGERS & ASSOCIATES
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5505 Corporate Drive
Troy, Michigan 48098
248-971-7000 Fax: 248-971-7001

43
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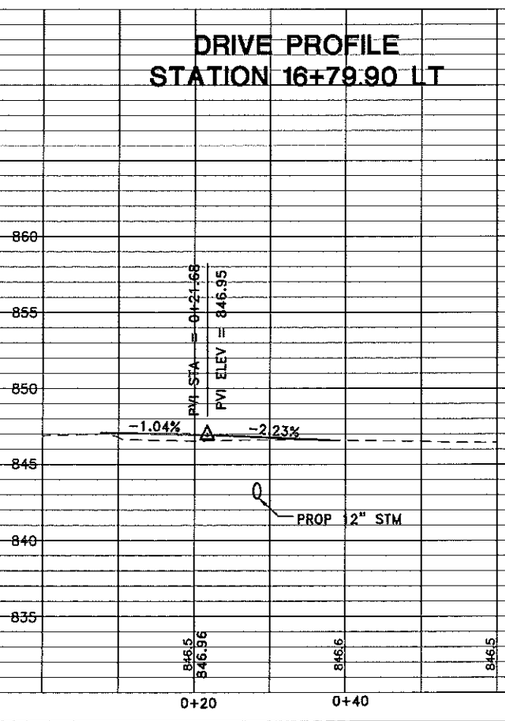


PAVEMENT COMPOSITION FOR DRIVEWAYS

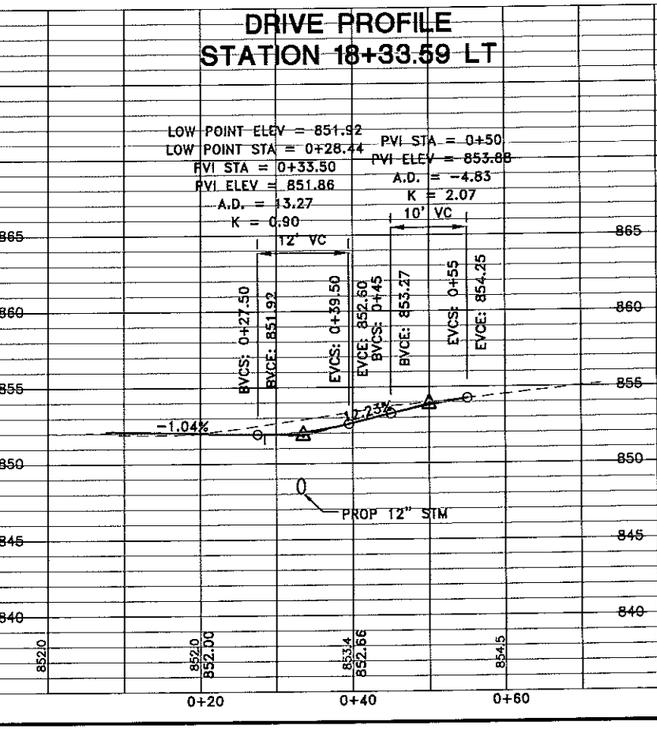
RESIDENTIAL ASPHALT DRIVEWAY APPROACH
448 – 1-1/4" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, PG64-22
301 – 4" ASPHALT CONCRETE BASE, PG64-22
204 – SUBGRADE COMPACTION

RESIDENTIAL CONCRETE DRIVEWAY APPROACH
452 – 6" NON-REINFORCED CONCRETE PAVEMENT
204 – SUBGRADE COMPACTION

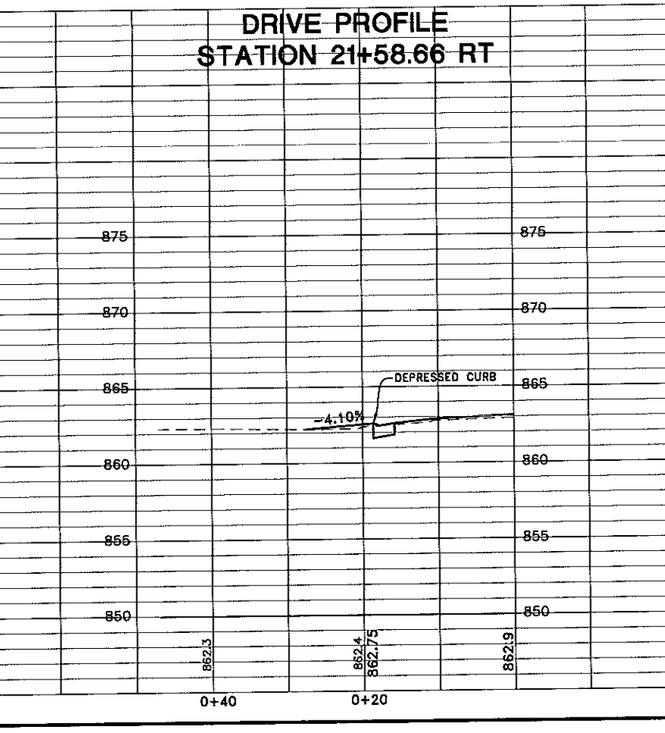
DRIVE PROFILE STATION 16+79.90 LT



DRIVE PROFILE STATION 18+33.59 LT



DRIVE PROFILE STATION 21+58.66 RT



BETHANY ROAD ROADWAY IMPROVEMENTS
DRIVEWAY DETAILS

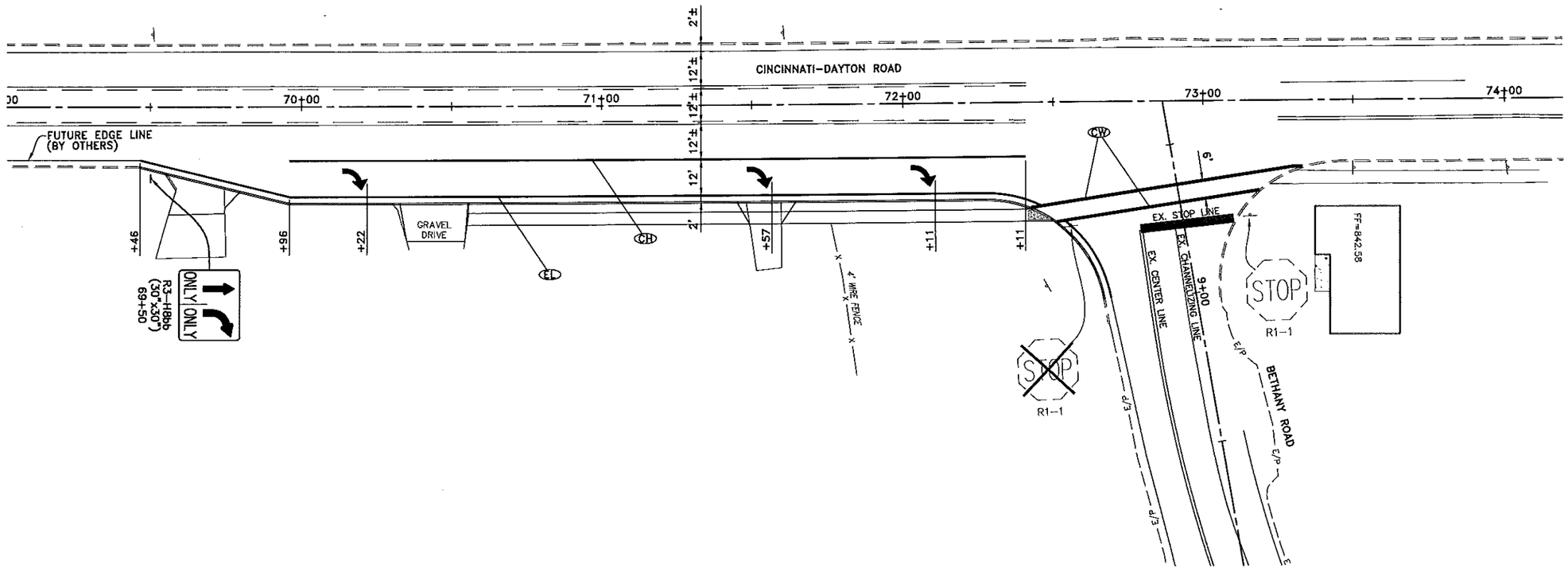
HORIZONTAL SCALE IN FEET 0 5 10 20
VERTICAL SCALE IN FEET 0 5 10

CALCULATED GAU
CHECKED NMM

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
8800 Lyra Drive, Suite 450
West Chester, OH 45069
513-779-7851 Fax: 513-779-7852

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LEGEND

- CL – ITEM 644, CENTER LINE, 4" DOUBLE YELLOW SOLID
- CH – ITEM 644, CHANNELIZING LINE, 8" WHITE
- EL – ITEM 644, EDGE LINE, 4" WHITE
- SL – ITEM 644, STOP LINE, 24" WHITE
- IM – ITEM 644, ISLAND MARKING, SOLID YELLOW
- CW – ITEM 644, CROSSWALK LINE, 12" WHITE
- TR – ITEM 644, TRANSVERSE LINE, 12" YELLOW SPACED PER T.E.M. SECTION 301–14

– PROPOSED SIGN

– EXISTING SIGN

– EXISTING SIGN TO BE REMOVED

NOTE:
THE CONTRACTOR SHALL USE SANDBLASTING FOR REMOVAL OF THE EXISTING PAVEMENT MARKINGS AT THE INTERSECTION OF CINCINNATI–DAYTON ROAD AND BETHANY ROAD STO LIMIT DAMAGE TO EXISTING SURFACE COURSE.

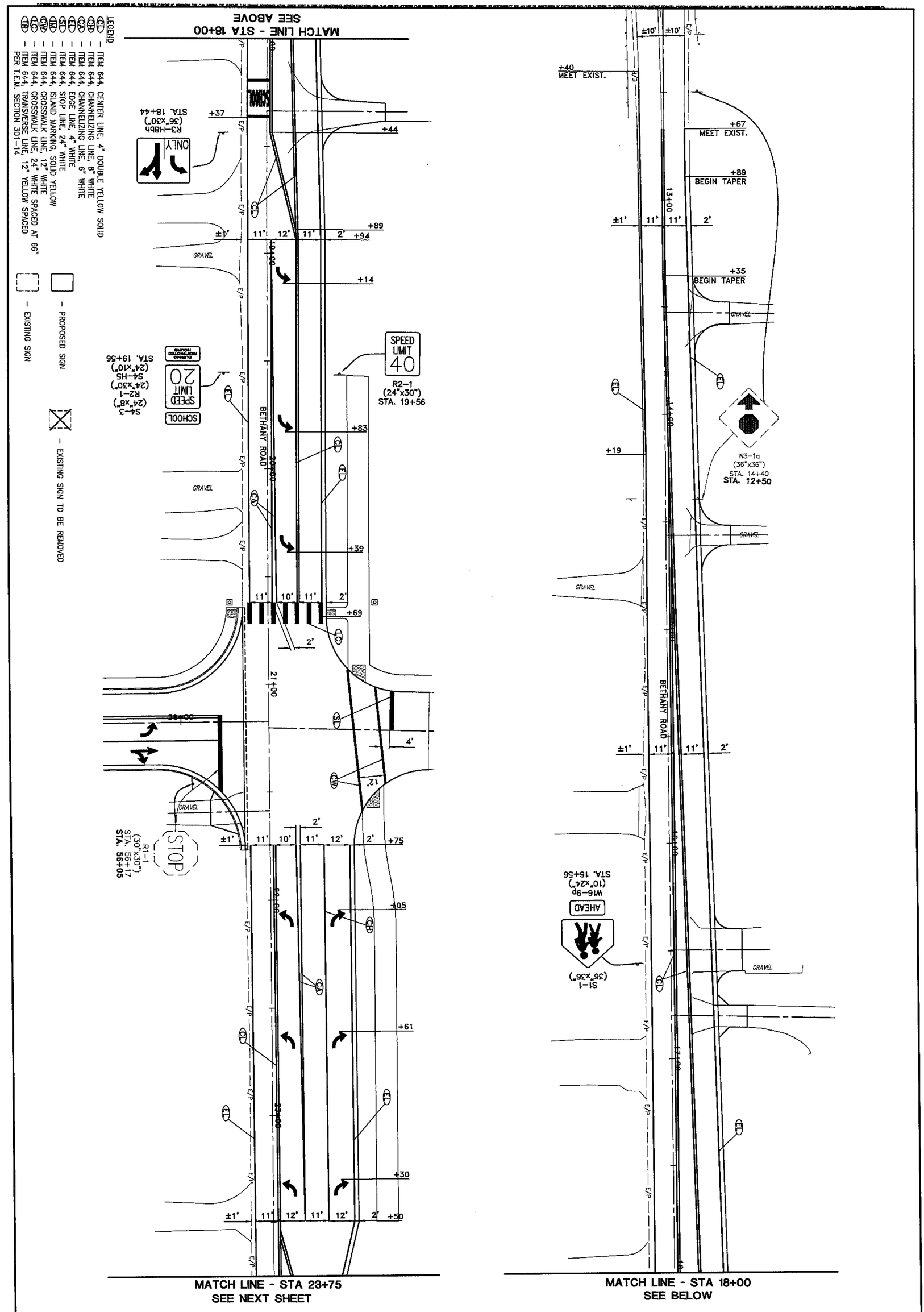
HORIZONTAL SCALE IN FEET (1"=20')

CALCULATED SJB
CHECKED NMM

CINCINNATI-DAYTON ROAD
TRAFFIC CONTROL PLAN

KLEINGERS
ENGINEERS AND ASSOCIATES
& SURVEYORS
Kleingers and Associates, Inc.
Mason, OH 45040
513-779-7851 Fax: 513-779-7852

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56



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KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
6303 Centre Park Drive, West Chester, OH 45069
513-779-7851 Fax: 513-779-7852

BETHANY ROAD

TRAFFIC CONTROL PLAN - STA. 12+40 TO STA. 23+75

CALCULATED SJB
CHECKED NMM

0 10 20 40
HORIZONTAL SCALE IN FEET (1"=20')

LEGEND

- (CL) – ITEM 644, CENTER LINE, 4" DOUBLE YELLOW SOLID
- (CH) – ITEM 644, CHANNELIZING LINE, 8" WHITE
- (EL) – ITEM 644, EDGE LINE, 4" WHITE
- (SL) – ITEM 644, STOP LINE, 24" WHITE
- (IM) – ITEM 644, ISLAND MARKING, SOLID YELLOW
- (TR) – ITEM 644, TRANSVERSE LINE, 12" YELLOW SPACED PER T.E.M. SECTION 301-14

– PROPOSED SIGN

– EXISTING SIGN

– EXISTING SIGN TO BE REMOVED

HORIZONTAL SCALE IN FEET (1"=20')

0 10 20 40

CALCULATED SJB
CHECKED NMM

BETHANY ROAD
TRAFFIC CONTROL PLAN - STA. 23+75 TO END

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
8163 Corporate Park Drive
West Chester, OH 45069
513-779-7851 Fax: 513-779-7852

HORIZONTAL SCALE IN FEET (1"=20')
0 10 20 40

CALCULATED SJB
CHECKED NMM

LIBERTY COURT
TRAFFIC CONTROL PLAN - STA. 51+41 TO END

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
8800 Governor's Hill Drive, Suite 400
Cincinnati, OH 45249
513-779-7851 Fax: 513-779-7852

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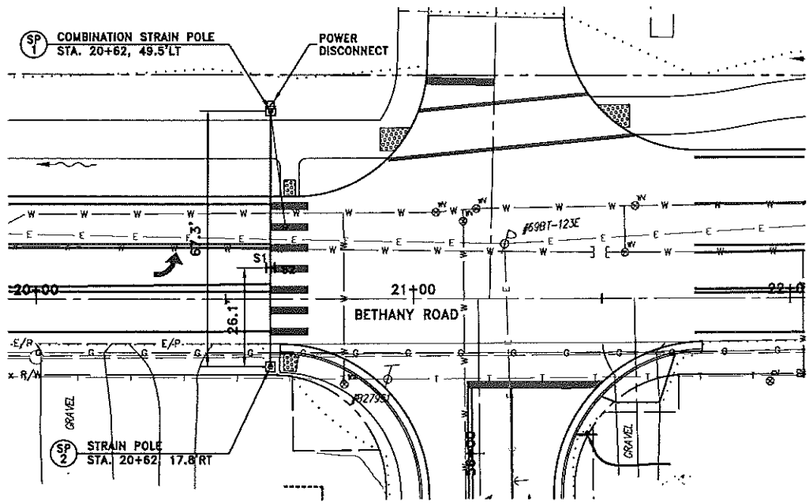
LEGEND

- (CL) – ITEM 644, CENTER LINE, 4" DOUBLE YELLOW SOLID
- (CH) – ITEM 644, CHANNELIZING LINE, 8" WHITE
- (EL) – ITEM 644, EDGE LINE, 4" WHITE
- (SL) – ITEM 644, STOP LINE, 24" WHITE
- (IM) – ITEM 644, ISLAND MARKING, SOLID YELLOW
- (TR) – ITEM 644, TRANSVERSE LINE, 12" YELLOW SPACED PER T.E.M. SECTION 301-14

– PROPOSED SIGN

– EXISTING SIGN

– EXISTING SIGN TO BE REMOVED



LOCATION PLAN VIEW

LEGEND

- STRAIN POLE
- LUMINAIRE
- REFLECTORIZED SIGN
- POWER DISCONNECT

NOTE: LUMINAIRE BRACKET ARM SHOWN FOR REFERENCE ONLY. SEE POLE CHART FOR MOUNTING ANGLE.

COORDINATE POWER HOOKUP WITH ELECTRIC UTILITY COMPANY

SIGNS



W11A-2
(36"36")
S1, S2

NOTES

UNDERGROUND UTILITIES

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE COUNTY ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN ON THE PLANS.

THE OWNER OF THE UNDERGROUND UTILITY FACILITY SHALL WITHIN FORTY-EIGHT HOURS, EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, AFTER NOTICE IS RECEIVED, STAKE, MARK, OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED.

SPECIFICATION COMPLIANCE

ALL MATERIALS MUST BE IN COMPLIANCE WITH CONTRACT SPECIFICATIONS UNLESS OTHERWISE APPROVED BY THE ENGINEER. ALL WORK AND MATERIALS NOT SPECIFICALLY REFERENCED IN THE CONTRACT SHALL MEET OR EXCEED THE REQUIREMENTS OF:

OHIO DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2005

THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (2005)

THE MOST RECENT REVISIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION, STANDARD CONSTRUCTION DRAWINGS:

TC-17.10	TC-81.10	HL-10.12
TC-21.20	HL-10.11	HL-60.11

ITEM 625, LUMINAIRE CONVENTIONAL, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE AS FOLLOWS:

LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS WITH AN IES 11-M-SC DISTRIBUTION AND 250 WATT HIGH PRESSURE SODIUM LAMPS SHALL BE AMERICAN ELECTRIC "SERIES 126" WITH PHOTOMETRIC DISTRIBUTION AE38491, COOPER "OVD" WITH PHOTOMETRIC DISTRIBUTION OVD252F, GENERAL ELECTRIC "M-400" WITH PHOTOMETRIC DISTRIBUTION 1014, OR EQUAL AS APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, "LUMINAIRE, CONVENTIONAL, AS PER PLAN" FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, 30' BRACKET ARM, CLAMP-ON STYLE, AS PER PLAN

A 30-FOOT CLAMP-ON TRUSS ARM HIGH RISE STYLE BRACKET ARM SHALL BE SUPPLIED BY THE CONTRACTOR, INCLUDING BRACKET PLATES AND ALL ACCESSORIES FOR COMPLETE INSTALLATION TO THE POLE.

ITEM 632, POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE PER CMS ITEM 625.15 AND SCD TC-83.10 WITH THE FOLLOWING EXCEPTIONS:

NO METER BASE SHALL BE INSTALLED.

DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH CMS ITEM 632, POWER SERVICE, AS PER PLAN, SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER.

THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOKUP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE LIGHTING IS ACCEPTED BY THE MAINTAINING AGENCY.

ITEM 632, STRAIN POLE FOUNDATION, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS ITEM 632.14, THE CONTRACTOR SHALL SUPPLY ANCHOR BOLTS, AND ANY REQUIRED ANCHOR BOLT COVERS OR COVER BASES.

THE CONTRACTOR SHALL FIELD VERIFY ANCHOR BOLT CIRCLE DIAMETER AND BOLT PLACEMENT WITH BCEO PRIOR TO INSTALLATION.

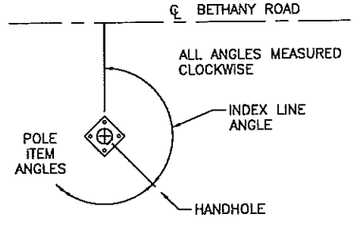
THE CONTRACTOR SHALL NOT USE FLY ASH IN CONSTRUCTION OF FOUNDATIONS FOR STRAIN POLES.

POLE CHART

POLE NO.	STATION & OFFSET	FOUNDATION ELEVATION	GROUND ELEVATION AT FOUNDATION	POLE TYPE	POLE HEIGHT (FT.)	TOP MESSANGER WIRE ATTACHMENT HEIGHT (FT.)	BOTTOM MESSANGER WIRE ATTACHMENT HEIGHT (FT.)	LUMINAIRE BRACKET ARM LENGTH (FT.)	INDEX LINE ANGLE (DEG)		ANGLES FROM INDEX LINE ANGLE (DEG)			
											MESSANGER WIRE	LUMINAIRE BRACKET ARM		
SP-1	STA. 20+62, 17.8'LT	860.91	860.91	5*	32.0	25	22		180°		180°			
SP-2	STA. 20+62, 49.5'LT	861.10	861.10	5*	32.0	25	22	30	180°		180°	180°		

* SUPPLIED BY BUTLER COUNTY ENGINEER'S OFFICE.

SIGNAL CLEARANCE:
16' MINIMUM
18' MAXIMUM



QUANTITIES

LOCATION				ITEM NUMBERS	625						630			632			
REFERENCE NO.	FROM	TO	SIDE		LUMINAIRE CONVENTIONAL, AS PER PLAN	30' BRACKET ARM, CLAMP-ON STYLE, AS PER PLAN	No. 10 600 VOLT DISTRIBUTION CABLE	POWER SERVICE, AS PER PLAN	GROUND ROD		SIGN FLAT SHEET, TYPE G	SIGN HANGER ASSEMBLY, SPAN WIRE		STRAIN POLE FOUNDATION, AS PER PLAN	STRAIN POLE, TYPE TC-81.10, DESIGN 5, INSTALLATION ONLY	MESSANGER WIRE, 7-STRAND, 3/8" DIAMETER, WITH ACCESSORIES	
					EA	EA	L.F.	EA	EA		EA	EA		EA	EA	L.F.	
SP-1	–	20+62	RT.						1					1	1	138	
SP-2	–	20+62	LT.		1	1	75	1	1					1	1		
S1											9	1					
S2											9	1					
TOTALS					1	1	75	1	2		18	2		2	2	138	

BETHANY ROAD ROADWAY IMPROVEMENTS
OVERHEAD SIGN DETAIL

HORIZONTAL SCALE IN FEET
0 10 20 40

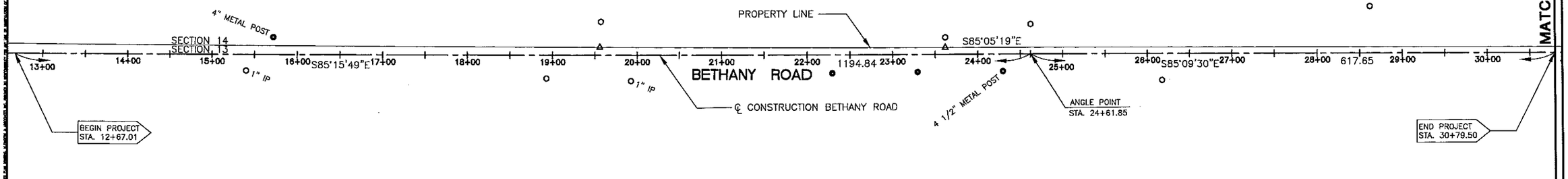
CALCULATED SJB
CHECKED NMM

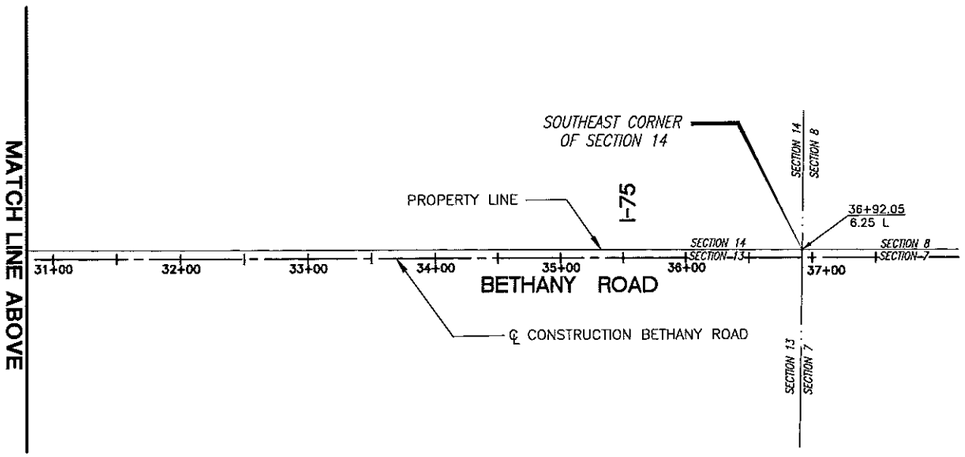
KLEINGERS & ASSOCIATES
Engineers And Surveyors
8200 Governors Hill Drive
West Chester, OH 45069
513-779-7851 Fax: 513-779-7852

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LIBERTY TOWNSHIP
SECTIONS 13 & 14, TOWN 3, RANGE 3
BUTLER COUNTY, OHIO

FOUND MONUMENTS BETHANY ROAD			
15+40.20	18.83	RT	1" IRON PIN
15+71.84	20.53	LT	4" METAL POST
18+93.11	27.17	RT	5/8" IRON PIN
19+55.79	9.32	LT	MAG NAIL
19+56.84	39.28	LT	5/8" IRON PIN
19+92.73	30.14	RT	1" IRON PIN
22+29.43	21.48	RT	2 1/2" METAL POST
23+29.33	20.35	RT	2 1/2" METAL POST
23+61.81	20.00	LT	5/8" IRON PIN
23+61.88	8.08	LT	MAG NAIL
24+29.47	20.00	RT	4 1/2" METAL POST
24+61.85	35.04	LT	5/8" IRON PIN
26+17.58	31.01	RT	5/8" IRON PIN
28+61.82	55.03	LT	5/8" IRON PIN





LEGEND

- ○ *5/8" IRON PIN FOUND (UNLESS OTHERWISE NOTED)*
- ⊕ *2½" METAL POST FOUND (UNLESS OTHERWISE NOTED)*
- △ *MAG NAIL FOUND*

BEARINGS ARE BASED ON OHIO STATE PLANE COORDINATE SYSTEM–SOUTH ZONE.

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

I HEREBY CERTIFY THAT THIS PLAT IS BASED UPON A FIELD SURVEY MADE UNDER MY DIRECTION.

DAVID L. COX *DATE*
OHIO PROFESSIONAL SURVEYOR NO. 7101

N

0 30 60 120
HORIZONTAL SCALE IN FEET

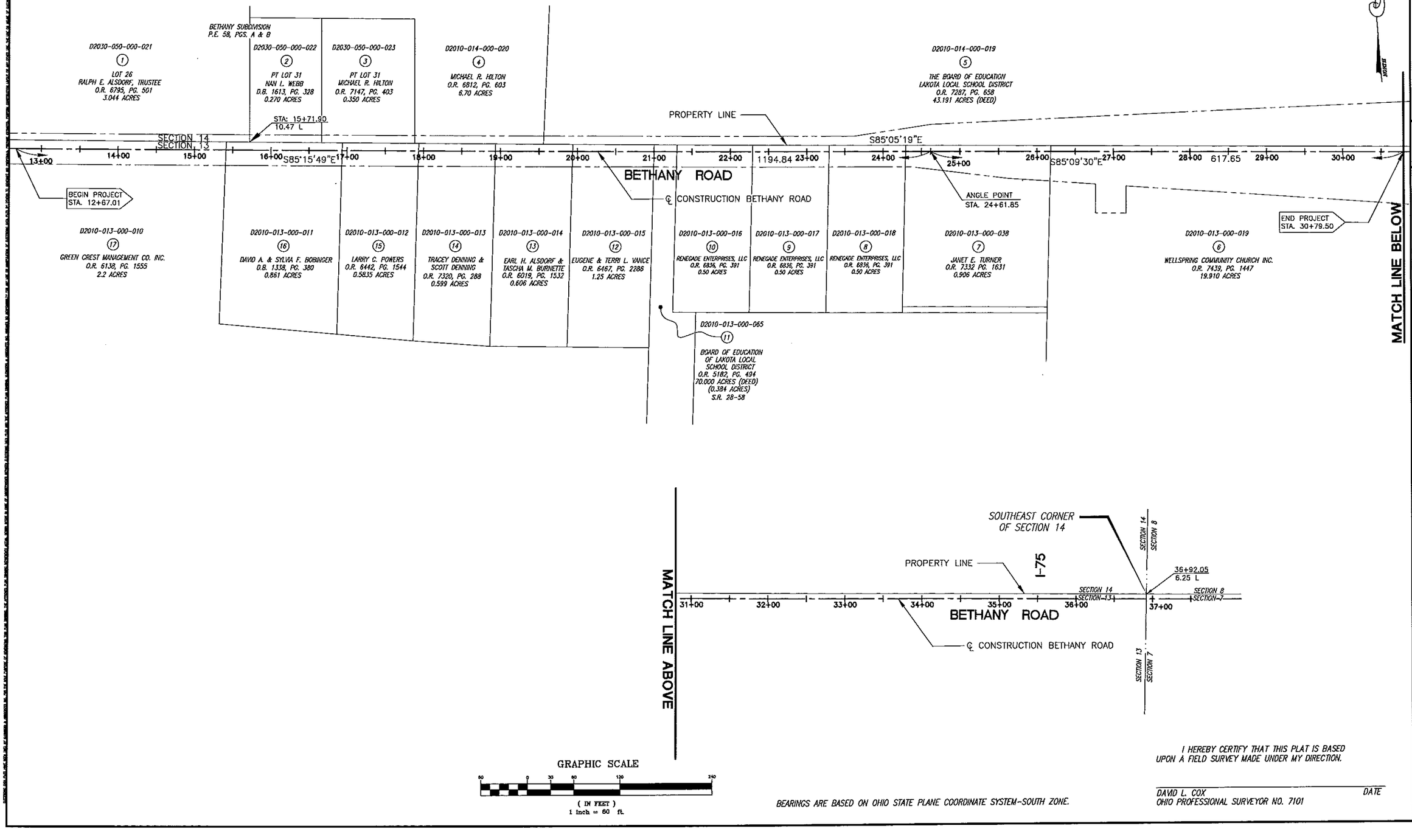
CALCULATED DSE
CHECKED DLC

RIGHT-OF-WAY PLANS BETHANY ROAD
CENTERLINE MAP

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
8163 Corporate Park Drive, Suite 200
West Chester, OH 45069
513-779-7851 Fax: 513-779-7852

50
56

LIBERTY TOWNSHIP
SECTIONS 13 & 14, TOWN 3, RANGE 3
BUTLER COUNTY, OHIO



GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

BEARINGS ARE BASED ON OHIO STATE PLANE COORDINATE SYSTEM-SOUTH ZONE.

I HEREBY CERTIFY THAT THIS PLAT IS BASED UPON A FIELD SURVEY MADE UNDER MY DIRECTION.

DAVID L. COX — DATE
OHIO PROFESSIONAL SURVEYOR NO. 7101

HORIZONTAL SCALE IN FEET
0 30 60 120

CALCULATED DSE
CHECKED DLC

RIGHT-OF-WAY PLANS BETHANY ROAD
PROPERTY MAP

KLEINGERS & ASSOCIATES
ENGINEERS, PLANNERS & SURVEYORS
8163 Corporate Park Drive, Suite 200
West Chester, OH 45069
513-779-7851 / Fax: 513-779-7852

51
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LEGEND

NOTE: UNDER NO CIRCUMSTANCES ARE THE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS OTHERWISE NOTED

T = TEMPORARY EASEMENT
WD = WARRANTY DEED
RW = RIGHT-OF-WAY EASEMENT
PRO = PRESENT RIGHT OF WAY OCCUPATION
NET RESIDUE = RECORD AREA - GROSS TAKE

LIBERTY TOWNSHIP
SECTIONS 13 & 14, TOWN 3, RANGE 3
BUTLER COUNTY, OHIO

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD		AUDITORS PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE		TYPE FUND	REMARKS
			BOOK	PAGE								LEFT	RIGHT		
1RW	RALPH E. ALSDORF, TRUSTEE	53/56	6795	501	D2030-050-000-021	3.044 ACRES	0.071 AC.	0.156 AC.	0.071 AC.	0.085 AC.					LOT 26 BETHANY SUBDIVISION
1T										0.032 AC.					
2RW	NAN L. WEBB	53/56	1613	328	D2030-050-000-022	0.270 ACRES	0.021 AC.	0.049 AC.	0.021 AC.	0.028 AC.					PART LOT 31 BETHANY SUBDIVISION
2T										0.004 AC.					
3RW	MICHAEL R. HILTON	53/56 & 54/56	7147	403	D2030-050-000-023	0.350 ACRES	0.028 AC.	0.070 AC.	0.028 AC.	0.042 AC.					PART LOT 31 BETHANY SUBDIVISION
3T										0.006 AC.					
4RW	MICHAEL R. HILTON	54/56	6812	603	D2010-014-000-020	6.70 ACRES	0.040 AC.	0.117 AC.	0.040 AC.	0.077 AC.					
4T										0.058 AC.					
10RW	RENEGADE ENTERPRISES, LLC	54/56	6836	391	D2010-013-000-016	0.50 ACRES	0.065 AC.	0.102 AC.	0.028 AC.	0.074 AC.					
10T1										0.020 AC.					
10T2										0.003 AC.					
12RW	EUGENE & TERRI L. VANCE	54/56	6467	2286	D2010-013-000-015	1.25 ACRES	0.071 AC.	0.077 AC.	0.054 AC.	0.023 AC.					
12T										0.007 AC.					

CALCULATED DSE CHECKED DLC

RIGHT-OF-WAY PLANS BETHANY ROAD
OWNERSHIP TABLE

KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS
6305 Centre Park Drive
West Chester, OH 45069
513-779-7851 Fax 513-779-7852